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REVIEWS OF NEW BOOKS.

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This year, as last, the first of our annuals is heralded from across the Atlantic. *The Gift*, in its graceful primrose and gold, is a pleasing harbinger of the class to which it belongs; and we have only to hope that all will keep up their characters at least as equally as this American performance. Not but that the fresh and palmy days of these rich and gay publications have declined; yet they are still tasteful offerings to remind friends and favourites of each other's affections, and remain their season upon the table, to have their literature idly scanned, and their embellishments commented upon, for the amusement of the hour.

The present volume is printed on rich paper, contains a variety of prose and verse, and is adorned with eight plates, two of them representing incidents in the life of Washington. The first—the American hero and Harvey Birch, by A. B. Durand, engraved by J. I. Pease—has nothing prominent in the two figures; and the last—Crossing the Alleghany, by D. Huntington, engraved by R. W. Dodson—is a very theatrical poling of a raft on a mountain-torrent. The frontispiece, "Agnes," by W. Page, engraved by I. Cheney, and "the Necklace," by Leslie, engraved by W. Humphreys, are beautiful productions; and the rest, though too much in one style, are congenial illustrations of the literary matter.

With regard to the latter, we need only mention, that H. W. Longfellow, N. P. Willis, R. W. Emerson, Mrs. Sigourney, and other writers less known on this side of the water, are among the contributors; and that, without aught striking, and rather too much translated from the German, the whole forms a very readable and agreeable miscellany. As examples, we select as much as we can manage from "The Schoolmaster's Progress," by Mrs. Kirkland (the author of *A New Home*," &c.), as most characteristic of the country, and a few verses by H. T. Tuckerman, recommended to us by the novelty of the flower as a subject of poetry, and by a graceful feeling in the treatment of it.

The schoolmaster is thus introduced:—

"Master William Horner came to our village to keep school when he was about eighteen years old: tall, lank, straight-sided, and straight-haired, with a mouth of the most puckered and solemn kind. His figure and movements were those of a puppet cut out of shingle and jerked by a string; and his address corresponded very well with his appearance. Never did that prim mouth give way before a laugh. A faint and misty smile was the widest departure from its propriety, and this unaccustomed disturbance made wrinkles in the flat skinny cheeks like those in the surface of a lake after the intrusion of a stone. Master Horner knew well what belonged to the pedagogical character, and that facial solemnity stood high on the list of indispensable qualifications. He had made up his mind, before he left his father's house, how he would look during the term. He had not planned any smiles (knowing that he must 'board round'), and it was not for ordinary occurrences to alter his arrangements; so that when he was betrayed into a relaxation of the muscles, it was 'in such a sort' as if he was putting his bread and butter in jeopardy. Truly he had a grave time that first winter. The rod of power was new to him, and he felt it his 'duty' to use it more frequently than might have been thought necessary by those upon whose sense the privilege had palled. Tears and sulky faces, and impotent fists doubled fiercely when his back was turned, were the rewards of his conscientiousness; and the boys—and girls too—were glad when working time came round again, and the master went home to help his father on the farm. But with the autumn came Master Horner again, dropping among us as quietly as the faded leaves, and awakening at least as much serious reflection. Would he be as self-sacrificing as before, postponing his own ease and comfort to the public good? or would he have become more sedentary, and less fond of circumambulating the school-room with a switch over his shoulder? Many were fain to hope he might have learned to smoke during the summer, an accomplishment which would probably have moderated his energy not a little, and disposed him rather to reverie than to action. But here he was, and all the broader-chested and stouter-armed for his labours in the harvest-field. Let it not be supposed that Master Horner was of a cruel and ogrish nature—a babe-eater—a Herod—one who delighted in torturing the helpless. Such souls there may be, among those endowed with the awful control of the ferule, but they are rare in the fresh and natural regions we describe. It is, we believe, where young gentlemen are to be crammed for college that the process of hardening heart and skin together goes on most vigorously. Yet among the uneducated there is so high a respect for bodily strength, that it is necessary for the schoolmaster to shew, first of all, that he possesses this inamissible requisite for his place. The rest is more readily taken for granted. Brains he *may* have—a strong arm he *must* have: so he proves the more important claim first. We must therefore make all due allowance for Master Horner, who could not be expected to overtop his position so far as to discern at once the philosophy of teaching. He was sadly browbeaten during his first term of service by a great broad-shouldered lout, of some eighteen years or so, who thought he needed a little more 'schooling,' but at the same time felt quite competent to direct the manner and measure of his attempts. 'You'd ought to begin with large-hand, Joshuay,' said Master Horner to this youth. 'What should I want coarse-hand for?' said the disciple, with great contempt; 'coarse-hand won't never do me no good. I want a fine-hand copy.' The master looked at the infant giant, and did as he wished, but we say not with what secret resolutions. At another time, Master Horner, having had a hint from some one more knowing than himself, proposed to his elder scholars to write after dictation, expatiating at the same time quite floridly (the ideas having been supplied by the knowing friend) upon the advantages likely to arise from this practice, and saying, among other things, 'It will help you, when you write letters, to spell the words good.' 'Pooh!' said Joshua, 'spellin' ain't nothin'; let them that finds the mistakes correct 'em. I'm for every one's havin' a way of their own.' 'How dared you be so saucy to the master?' asked one of the little boys, after school. 'Because I could lick him easy,' said the hopeful Joshua, who knew very well why the master did not undertake him on the spot. Can we wonder that Master Horner determined to make his empire good as far as it went? A new examination was required on the entrance into a second term, and, with whatever secret trepidation, the master was obliged to submit. Our law prescribes examinations, but forgets to provide for the competency of the examiners; so that few better farces offer than the course of question and answer on these occasions. We know not precisely what were Master Horner's trials; but we have heard of a sharp dispute between the inspectors, whether angel spelt *angle* or *angel*. *Angle* had it, and the school maintained that pronunciation ever after. Master Horner passed, and he was requested to draw up the certificate for the inspectors to sign, as one had left his spectacles at home, and the other had a bad cold, so that it was not convenient for either to write more than his name. Master Horner's exhibition of learning on this occasion did not reach us; but we know that it must have been considerable, since he stood the ordeal. 'What is orthography?' said an inspector once, in our presence. The candidate writhed a good deal, studied the beams overhead and the chickens out of the window, and then replied, 'It is so long since I learnt the first part of the spelling-book, that I can't justly answer that question. But if I could just look it over, I guess I could.' Our schoolmaster entered upon his second term with new courage and invigorated authority. Twice certified, who should dare doubt his competency? Even Joshua was civil, and lesser louts of course obsequious; though the girls took more liberties; for they feel, even at that early age, that influence is stronger than strength. Could a young schoolmaster think of feruling a girl with her hair in ringlets and a gold ring on her finger? Impossible—and the immunity extended to all the little sisters and cousins; and there were enough large girls to protect all the feminine part of the school. With the boys Master Horner still had many a battle; and whether with a view to this, or as an economical *ruse*, he never wore his coat in school, saying it was too warm. Perhaps it was an astute attention to the prejudices of his employers, who love no man that does not earn his living by the sweat of his brow. The shirt-sleeves gave the idea of a manual-labour school, in one sense at least. It was evident that the master worked, and that afforded a probability that the scholars worked too. Master Horner's success was most triumphant that winter. A year's growth had improved his outward man exceedingly, filling out the limbs so that they did not remind you so forcibly of a young colt's, and supplying the cheeks with the flesh and blood so necessary when mustaches are not

worn. Experience had given him a degree of confidence, and confidence gave him power. In short, people said the master had waked up; and so he had. He actually set about reading for improvement; and although at the end of the term he could not quite make out from his historical studies which side Hannibal was on, yet this is readily explained by the fact that he boarded round, and was obliged to read generally by firelight, surrounded by ungoverned children. After this, Master Horner made his own bargain. When school-time came round with the following autumn, and the teacher presented himself for a third examination, such a test was pronounced no longer necessary; and the district consented to engage him at the astounding rate of sixteen dollars a month, with the understanding that he was to have a fixed home, provided he was willing to allow a dollar a week for it. Master Horner bethought him of the successive 'killing-times,' and consequent dough-nuts of the twenty families in which he had sojourned the years before, and consented to the exaction. Behold our friend now as high as district-teacher can ever hope to be,—his scholarship established, his home stationary and not revolving, and the good behaviour of the community insured by the fact that he, being of age, had now a farm to retire upon in case of any disgust. Master Horner was now the pre-eminent beau of the neighbourhood, spite of the prejudice against learning. He brushed his hair straight up in front, and wore a sky-blue riband for a guard to his silver watch, and walked as if the tall heels of his blunt boots were egg-shells, and not leather. Yet he was far from neglecting the duties of his place. He was beau only on Sundays and holydays; very schoolmaster the rest of the time."

He now encounters his fate in the shape of a *belle*:—

"It was at a 'spelling-school' that Master Horner first met the educated eyes of Miss Harriet Bangle, a young lady visiting the Engleharts in our neighbourhood. She was from one of the towns in Western New York, and had brought with her a variety of city airs and graces somewhat caricatured, and set off with year-old French fashions much travestied. Whether she had been sent out to the new country to try, somewhat late, a rustic chance for an establishment, or whether her company had been found rather trying at home, we cannot say. The view which she was at some pains to make understood was, that her friends had contrived this method of keeping her out of the way of a desperate lover, whose addresses were not acceptable to them. If it should seem surprising that so high-bred a visitor should be sojourning in the wild woods, it must be remembered that more than one celebrated Englishman and not a few distinguished Americans have farmer brothers in the western country, no whit less rustic in their exterior and manner of life than the plainest of their neighbours. When these are visited by their refined kinsfolk, we of the woods catch glimpses of the gay world, or think we do.

'That great medicine hath
With its tinct gilded'

many a vulgarism to the satisfaction of wiser heads than ours. Miss Bangle's manner bespoke for her that high consideration which she felt to be her due. Yet she condescended to be amused by the rustics, and their awkward attempts at gaiety and elegance; and, to say truth, few of the village merry-makings escaped her, though she wore always the air of great superiority."

These sketches of individuals and customs must answer our purpose without our going into the amours of the original pair, whom we have made personally known to our readers, or of a third party named Ellen, and added to the drama: suffice it to say that . . . . we will not disclose either their adventures or their issue (we mean of the adventures).

The brief poem of which we have made choice is—

"*The Night-blooming Ceres.*

How coyly thou the golden hours dost number!
Not all their splendour can thy love beguile;
Vainly the morning zephyrs fan thy slumber,
And noon's rich glory woos thee for a smile.

For thou dost blossom when cool shadows hover,
And dews are falling through the dusky air;
When with new fervour dreams the happy lover,
And winds grow solemn with the voice of prayer.

While all around thee earth's bright things are sleeping,
Gay lilies fade, and droops the crimson rose,
Fresh is the vigil thou alone art keeping,
And sweet the charms thy virgin leaves disclose.

Thus in the soul is deep love ever hidden,
Thus noble minds will fondly shun the throng,
And at their chosen time start forth unbidden,
With peerless valour or undying song.

Thus the true heart its mystic leaves concealing,
Folds them serenely from the world's broad glare,
Its treasured bliss and inmost grief revealing
To the calm starlight and the dewy air.

Blest is thy lesson, vestal of the flowers,—
Not in the sunshine is our whole delight;
Some joys bloom only in life's pensive hours,
And pour their fragrance on the breeze of night."

Mary of Burgundy: or, the Revolt of Ghent. By G. P. R. James, Esq. 8vo, pp. 427. Smith, Elder, and Co.

THIS is the second volume of the author's works in their new form of quarterly octavos, with original prefaces and corrected texts. In the series it succeeds "The Gipsy;" and is to be followed by "The Huguenot." Of the historical romance itself we need say nothing, as it has been universally acknowledged to be one of Mr. James's most stirring productions; but we may notice a curious coincidence connected with it, viz. that in reading for review only some hours before, *The Gift*, American Annual, we encountered the following passage in the Diary of a Recluse (a reflective paper), with which that publication concludes:

"*Feb.* 1*st.*—Read Mary of Burgundy. The Lord of Hannut says, 'Hidden within the bosom of this mortal clay is some fine essence, participating in the affections of the earthly thing it inhabits, but thirsting for knowledge beyond this world, and yearning for joys more pure and love more imperishable than the joy and love of this world can ever be.' I regret that I do not write here every day. When I think of all the thoughts that have passed over my mind like shadows across a mirror, and left as little trace, it is always with a feeling of regret; and yet why should that be cause for regret more than that the beautiful clouds will disappear, and the flowers and leaves? A beautiful thought is not more beautiful than a flower, yet we see myriads of them die without leaving a trace of their existence, and never sigh for them, why should we for lost thoughts?"*

We have for ourselves a little to say to Mr. James's introduction, which is replete with profound general observation, built upon the tenour and treatment of his theme. These pages (he tell us) "were written at a period when Europe had just been agitated by a new revolution in a country already remarkable in history for one of the most tremendous social convulsions which ever shook down old and decaying institutions, to make room for others better adapted to the age. Earthquakes, however, seldom pass away with only one shock, and the milder and more beneficent revolution which occurred in France in the year 1830 was perhaps but a natural consequence of that which went before. Nevertheless, the expulsion of the Bourbon dynasty, and the fears and apprehensions of a new period of anarchy which it spread throughout Europe, naturally turned my thoughts to the consideration of other great popular movements mentioned in history. Having been in Paris at the time when the last revolution took place, and having had various opportunities of learning the motives and some of the secret proceedings of those who acted a part in that important transaction, it became a curious subject of inquiry, whether it generally occurs, in such insurrections (successful or not), that the pressure of circumstances, and the inevitable course of events, by forcing forward that human selfishness, which is latent, if not developed, in every bosom, into prominent action, do or do not so modify the results, that only a partial change is effected, even when the convulsion that takes place seems, by its strength and fury, destined to sweep away all before it, and not alone to bring forward new dynasties and improved institutions, but to create totally different forms of government, and alter the whole framework of society. In looking back throughout all history, I found that in almost every case where great movements of the masses had taken place, the ultimate results were by no means commensurate with the forces brought into operation; that institutions, very similar to those which had been carried away, rose again in their place,—modified, it is true, but slightly; and that changes of names were more frequently to be found than changes of things, as the consequences of a revolution. The new institutions principally differed from the old ones in being more susceptible of after-modification; and in building from the ruins of the past,—as the world is continually doing,—it seemed to me, we usually erect fabrics which we can enlarge and improve with greater facility than could be done with the sterner and more solid structures of ages passed away."

In the philosophy of history, but in a very different form of solution, this quotation agrees very curiously with the passage from M. Guizot in our preceding note.

"Still, however, (continues Mr. James), the question recurred, why it is that the effect is always less than we should have anticipated from the cause?—why, when a tyranny has been overthrown, when liberty has deviated into the fiercest anarchy, and the most necessary restraints of society have been set at nought, as insupportable shackles upon man's

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* In the same paper is another literary notice *à propos* to the present day:—"*January* 28*th.* Finished Guizot's 'History of Civilisation in Europe,' a clear and concise view of its progress, speaking of which he says, 'Thus man advances in the execution of a plan which he has not conceived, of which he is not aware, and comprehends by its results alone. Conceive a great machine, the design of which is centered in a single individual, though its various parts are entrusted to different workmen, strangers and separated from each other; none of these understand the work as a whole, which he concurs in producing: and thus by the hand of man are the designs of Providence wrought out in the government of the world.' Thus it has often appeared to me that we are the instruments of some great and unknown end. But I forbear to speculate." But who, reading this passage in the *Lit. Gaz.* of October 12th, seeing all that is going on around us, can abstain from speculating, and deeply too, on the parts which this very illustrious minister and his royal master are at this moment playing? How full of truth and philosophy is the thought! Ah, the greatest are but flies on the chariot-wheel, after all!—*Ed. L. G.*

freedom—why is it that we find, in a wonderfully short space of time, a new but no less oppressive tyranny established; laws more stringent than ever, succeeding others which had been blotted out; and nations submitting patiently to bonds more weighty, if not more grievous, than those which they have cast off? Is it, I asked myself, that old institutions are really stronger than they seem, and exist still, though overwhelmed in the torrent of innovation, which, like a flood that has overwhelmed a city in a valley, gradually subsides, and leaves the solider constructions standing, though desolate, to be tenanted by new inhabitants in a brighter day?—or is it that there is less real than apparent strength in the great revolutionary movements which take place from time to time, more violence than vigour, more fury than power? Perhaps something of both; but yet, in many of the great popular ebullitions which have marked memorable epochs, we find immense and extraordinary energy displayed by the people in asserting their rights and liberties,—courage, wisdom, resolute endurance, perseverance—and, nevertheless, comparatively little has been accomplished of all the great objects that were sought. In almost all these instances, I thought I could distinctly trace various modifications of human selfishness, on the part both of leaders and followers, acting, as it were, in the manner of dams and sluices, and, by diverting the stream of popular energy from one direct and straightforward course, diminishing the force of the current, and turning the torrent, which might have overborne every obstacle, into a mere inundation, which gradually flowed off, or evaporated, as the sources which supplied it were exhausted."

Now could we wish to see this incontrovertible theory wrought out in detail—not alone as by the keen-sighted impersonations and acts so ably invented or traced by Mr. James in his *Mary of Burgundy*,—but actually by dissecting the actors in any real revolution, and demonstrating the springs, often the most trifling, out of which the most important consequences resulted. But we fear their obscurity, in many a dark and many an unstable human bosom, renders this impossible; and we must therefore be satisfied with such acute and able inferences as our author draws from such premises as are visible to observant men. That in accomplishing this, and especially the more barbarous features of the picture, Mr. James has taken his stand on genuine grounds cannot be doubted, when we read the following:

"The chancellor Hugonet, and Imbercourt count of Meghe, two of her most devoted friends, were executed under her very eyes, while, with dishevelled hair and floods of tears, she was beseeching the citizens in the public market-place to spare them; and the blood of her faithful servants is said to have sprinkled her garments as she was carried fainting from the terrible scene. Her friends and relations were banished from the city; and Louis XI., marching on at the head of a large army, while affecting to consider the interests of the orphan princess, not only robbed her of her territories, but exercised the most inhuman cruelties upon her subjects. Perhaps in the whole range of history no example occurs of an unjust war carried on with such barbarous incidents. Not content with the usual excesses of warfare, wherever resistance was shewn by the vassals of the house of Burgundy, Louis called in the arm of the executioner to accomplish what strife had left undone. On several occasions more than a hundred prisoners were beheaded in one day, for no crime but having remained faithful to their sovereign; and old John Molinet, an eye-witness of what he relates, gives the most fearful picture of the cruelties exercised by a king calling himself Most Christian. 'The account would be too long and incredible,' he says, in his quaint and pedantic style, 'if I were to reckon up the exactions, the scornings, the opprobriums, the slaughters, the tyrannies, the robberies, the seizures, and the inhumanities, which the king permitted his free archers to commit in the conquests which they effected, *per fas et nefas*, of the towns named; for then full course was given to the deflowering of virgins, the effusion of innocent blood, the spoiling of hospitals, the pillage of matrons, the imprisonment of youths, the destruction of children, the drowning of old men, the burning of churches, the persecution of all persons, the violation of women, the demolition of towns, and the ruining of the castles and farm-houses of the open country, as long as fire and sword could do their work, which failed sooner than the rage of the satellites who employed them.' He then goes on to detail the tortures inflicted on the prisoners and the peasantry, especially of the female sex, and sums up all by assuring us that it was common to demand of a wife a ransom for her captive husband, and when it was obtained, to deliver her only his corpse; that villages were constantly burnt after having paid composition; that prisoners were even crucified in their dungeons; and that, in the end, Louis caused ten thousand mowers to be collected from the Soissonnois, Vermandois, and neighbouring territories, and employed to cut down the rich harvests of Flanders and Hainault while they were yet green."

That the King of Prussia is about to banish to an island out of Europe the assassin who recently attempted his life, is the finest contrast which can be imagined in favour of the progress of wisdom and humanity, within the nearly four centuries which have elapsed since these horrors were perpetrated. May that progress continue, and grow faster and faster!

MR. DRUMMOND HAY'S WESTERN BARBARY.

[Second notice: conclusion.]

Some remarkable remains of an old city of the Room, called Shemmees, are described, but the obstacles to examining them sufficiently balk our curiosity; and we must leave them, to finish with a few more characteristic traits.

"At five we sallied forth from the wood, and passed through a large village called Leblet. The inhabitants rushed out from their houses to have a sight of the Ensara. The country around was cultivated with the grain called drà, and there was every prospect of a favourable harvest. 'God be praised,' said the kaid, 'for his bounty: last year, in truth, we had a sad prospect for the crops, and had not my master, Seedy Abd Selam E'Slowy, ordered the Jews—God curse them!—to pray for rain, I know not what would have become of God's creatures!' 'Why did not the Mussulmen,' said I, 'offer up their prayers?' 'So they did,' he replied, 'and for twenty days and nights,—and to the banner of each mosque was affixed a prayer written by the Fekee himself. The prayers floated in the face of heaven—but all in vain, for the prayers of the faithful are like music to God, who is worthy of all praise; and therefore the Almighty, rejoicing in the sweet sound of our supplication, granteth not the desires of our prayers, for he wishes us to continue still to pray. But no sooner is he tormented with the disgusting prayers of Jews and infidels, than he granteth forthwith their petitions, in order to be freed from their importunities.'"*

"In the district of Bemin Sooar, a mountainous country inhabited entirely by Berber tribes, there is one place, where, during the fair, a barter of a very curious kind takes place. This fair is held only once a year, and is chiefly resorted to for the purpose of bachelors finding wives, married men adding to their matrimonial treasures, and maidens or widows getting husbands. In fact, the whole affair resolves itself into the women selling themselves; but to escape the ignominy of such a procedure, the traffic is carried on in the following manner:—Each lady desiring to enter into wedlock dresses herself in her best and most becoming attire, and taking with her a piece of cloth of her own weaving, sits down unveiled in the market-place. The men, both young and old, who are candidates for matrimony, parade about the market examining the texture of the cloth displayed by the ladies, and scrutinising at the same time their looks and behaviour. Should the customer be pleased with the maiden, he inquires the price of the cloth; she replies by naming what she would expect as a dowry, and the amount of this she raises or depresses according as the candidate for her heart may please her, resorting to the demand of an exorbitant sum should she be averse to the purchaser. During this barter the enamoured swain is able, in some degree, to judge of her temper and character. If they come to an agreement, the parents of the girl are appealed to; and they have the right to assent or not, as they please. Should they assent, the parties adjourn to a public notary, the contract is made, and the purchased bride is carried off to her new home. In this traffic, widows are at a low price in general, and divorced ladies sell their cloths very cheap. The wife thus purchased cannot be resold, however much the purchaser may repent of his bargain. She is his lawful wedded wife, and retains the purchase-money, which is her jointure or dowry. It is evident that this curious system of barter has been resorted to by these Mahomedan mountaineers as a means of evading the law of the prophet, which interdicts all courtship before marriage."

The tyranny of the rulers of these enslaved people is so monstrous as to be all but incredible. Mr. H. informs us:

"The most horrible tortures are resorted to for forcing confession of hidden wealth. The victim is put into a slow oven, or kept standing for weeks in a wooden dress; splinters are forced between the flesh and nail of the fingers; two fierce cats are put alive into his wide trousers; and the breasts of his women are twisted by pinchers. Young children have sometimes been squeezed to death under the arms of a powerful man, before the eyes of their parents. A wealthy merchant at Tangier, whose *auri sacra fames* had led him to resist for a long time the cruel tortures that had been employed against him, yielded at length to the following trial:—He was placed in the corner of a room wherein a hungry lion was chained in such a manner as to be able to reach him with his claws, unless he held himself in a most constrained and unnatural position."

In conclusion, we give the author's interesting notice of the failure of Mr. Davidson's expedition, the melancholy story of which was inserted, at the time, in our pages.

"Davidson (he says) committed, I conceive, a great error in bringing with him from London

* "Absurd as this may appear, it is, nevertheless, the general belief in Maroceo."

Abú Bekr as his companion. Putting out of the question the physical incapability and want of moral courage of that very excellent and enlightened negro, the circumstance of his being connected with the reigning families in Soudan not only rendered his return to that country dangerous to himself, but compromised the life of his protector, who, I think, took a very mistaken view on the subject in his letter to the Duke of Sussex, dated 3d of July, 1836, in which he said, 'My companion (Abú Bekr) begs most respectfully to present his duty, and hopes your royal highness will deign to receive the few lines from his pen which he begs me to enclose. I am sorry to say I have great fears for his health: he cannot bear fatigue, and has been attacked with ophthalmia. The whole of the Soudan people know him, and tell me he will prove a certain passport, that he is a cousin of Hamed Libboo, and another of his cousins, Ali, called Koutoribu, the warrior, is now king of Kong, and that many of his relations are at Kong, all rich and in power.' When in Marocco, although his master gained the good wishes of many for having liberated and cherished a Mohamedan, Abú lost caste, as having been in Christian thraldom, and continuing to live with Davidson, became an object of constant suspicion to all Moslems; and should he have attempted to return to Europe after visiting the interior, he would have endangered both his own life and that of his protector; for the Sultan of Marocco looks upon himself as the rightful sovereign of all persons professing Mohamedanism. The health of Abú was also a constant source of trouble to his patron: he was a timid creature, and constantly embarrassing Davidson by his want of energy and moral courage. Even before we arrived at Rabat he appeared to be suffering from the effects of the journey, and often declared to me in confidence that he wished himself again in England, and that he never would have undertaken the journey had he not considered it to be a debt of gratitude to Davidson; that he had no desire to visit his native country, and that his sole hope was to return ere long to Europe, and live quietly amongst an enlightened and civilised people. Abú Bekr was a good Arabic scholar, but understood very little of the vulgar tongue. He had a great contempt for the Moors, and was especially disgusted with their ignorance and faithlessness. Little or nothing has been heard of him since Davidson's murder, and there appears every reason to suppose that he is dead. I attribute the failure of all our travellers in their attempts to penetrate into the interior of Africa to the notoriety with which their perilous journey has been undertaken, thus exciting the jealousy of both natives and foreigners. I have not much faith in Caillie's accounts: he may have been at Timbuctoo, but if he has accuracy as a draftsman, it does not appear to have been his forte. I shewed to a native of Timbuctoo the sketch he gives of that town, and the man neither recognised the forms of the houses nor the situation of the town itself; although on being shewn other drawings of cities and villages with which he was also acquainted, he at once named the places which they represented."

We have taken no pains with these extracts; but feel assured they will at this season prove an acceptable *mélange* to our readers, and a strong recommendation of the little volume whence they are taken. We believe Mr. Murray is about to issue an edition in larger type and greater size—and the work is well worthy of it—for readers whose eyes disdain (?) the molecules of cheap literature.

The Archæological Journal, &c. No. III. London. Longman and Co.; Pickering: Oxford, Parker: Cambridge, Deighton.

THE late interesting meeting at Canterbury has given an immense impetus to this Association, and, of consequence, to the well-edited Journal of its Transactions. The present No. opens with an excellent paper on Sepulchral Brasses and Incised Slabs, by Mr. Albert Way, in which, among other things, the practice of enamelling the former description of monuments is touched upon in a manner which, we trust, will lead to more extended investigation. The next paper, by Mr. T. Wright, is a curious illustration of domestic architecture in the middle ages, deduced from descriptions in ancient Fableaux, which relate circumstances in the dwelling-places of the peasantry and *bourgeoisie*. All the various apartments, their relative positions, and their uses, are pointed out; and we see how thieves or lovers made their way in or out, how jealous husbands watched their wives, and how monks and priests were entertained or thrown out of windows or down stairs. A remarkable building, representing the manor-house of a country gentleman of the thirteenth century, is engraved at page 219. Mr. Wright promises as a sequel to describe the interior economy of large baronial castles of the same period from contemporary metrical romances. The primeval antiquities of the Channel Islands supply much important information to guide us with reference to these remote memorials of early mankind in every land; and the ruins of Shobdon Old Church, Herefordshire, built about 1141, affords material for another good antiquarian communication. But the whole No. will be found worthy of the attention of archæologists, and lead on, we trust, to the greater extension of the numerous body now associated to rescue our national remains from ignorant destruction or senseless neglect.

The Zoology of the Voyage of H. M. S. Sulphur, Captain Sir E. Belcher. No. VII. Edited by R. B. Hinds, Esq. Smith, Elder, and Co.

THE second part of the Mollusca is here given, and enriched with a multitude of specimens, engraved and coloured with every attention to the most minute accuracy. Though small are many of the objects, great is the contribution to the science of natural history; and when Prof. E. Forbes has further developed his new theory, sketched out at the British Association, an additional value and interest will attach to this, among other works, which illustrate the nature of mollusk creation.

The Two Admirals: a Tale of the Sea. By J. F. Cooper. London, Bentley.

THE latest volume of the "Standard Novels" gives us in one the three original volumes of Cooper's naval tale, which being full of the sea, we need not add is in the author's best vein.

The Young Husband. By Arthur Freeling. 2d edit. pp. 164. Houlston and Stoneman.

WE fancy books of this sort ("The Bride," "The Wife and Mother's Book," &c., for example) must have some circulation, attributable principally to their *ad-captandum* titles. They are, nevertheless, the merest commonplace, and very trashy. For instance, the Young Husband begins with a chapter on marriage, and in these words: "The Deity has implanted in our nature certain feelings and affections with a view of perpetuating the species: thus *children will be born*," &c., in spite of their teeth!

ARTS AND SCIENCES.

THE BRITISH ASSOCIATION (YORK).

WE this week commence with Sir John Herschel's report. We have divided it, however, in order to give early insertion to an abstract of the first results obtained from a series of three years' anemometrical observations by Mr. Snow Harris at Plymouth. These two will complete the magnetical and meteorological papers mentioned in our introduction last week to Col. Sabine's report.

In the arrangement of the subjects of Sir John Herschel's report, the plan of former reports (see *Lit. Gaz.*, No. 1389), having been found convenient, is adhered to: and first, respecting the

Antarctic Expedition.—The return of the expedition, which took place very shortly after the meeting of 1843, has closed this branch of our report in a manner the most highly gratifying, whether we regard the magnitude and geographical interest of its discoveries, the vast harvest of magnetic and meteorological observations it has secured, the extent of ocean traversed, and the consequent importance of the data it has furnished towards the completion of the magnetic survey of the globe in its most difficult points, or, lastly, the triumph of skill, conduct, and perseverance on the part of the commanders of the expedition, and every one concerned in it, which have, under Providence, been the means of conducting so arduous and prolonged a struggle with every natural obstacle to a glorious and happy conclusion.

The results of the magnetic observations made during the second year of the operations of this expedition will shortly appear, under the form of a sixth series of contributions to terrestrial magnetism, by Col. Sabine, already printed for the second part of the Transactions of the Royal Society for the current year. During this period, the ships setting out from Hobarton, and visiting Sydney and New Zealand in their progress, explored a second time the great icy barrier in lat. 78° south, which had stopped them in the former year, and which again resisted their efforts either to penetrate it or to turn its eastern extremity. Quitting it at length, and keeping nearly on the sixtieth parallel of south latitude, they crossed the whole breadth of the South Pacific to the Falkland Islands, where the observations of that season terminate. Those of the last year of the expedition not having yet been placed in his hands, Col. Sabine has forborne to anticipate the principal part of the conclusions suggested by the materials thus brought under discussion, until supported by a complete and general review of their whole mass. There are, however, some points of prominent interest which have emerged from the discussion of the first two years' observations, which ought not to be passed over in silence.

In the first place, Col. Sabine considers it to have been rendered almost certain that in the two ships employed in the expedition, and probably, therefore, in all ordinary sailing vessels, there is little or no appreciable amount of permanent magnetic polarity (though in steamers or iron ships the case may be otherwise), but that the whole of the transient polarity induced in the iron by the earth's action at any given moment and locality is not *instantaneously* destroyed and exchanged for a new magnetic state on a change of geographical place or angular position, though the greater part of it is so. A residual polarity lingers, as it were, in the iron of the ship, and fades out more slowly, so that the vessel carries with it into every new

point of its course some trace and impress of the terrestrial magnetism of those which it has left. This consideration, joined to the converse proposition, which it renders exceedingly probable (viz., that the magnetism, which thus requires time for its destruction, is also not instantaneously developed), would render the problem of deducing rigorous results from observations made during voyages a very difficult one, were it not that the portion of magnetic power which thus lingers in the iron is extremely small, compared with that which obeys the laws of soft iron in its instantaneous generation and destruction.

Another conclusion of a very general and positive character respects the forms of the magnetic lines in the southern hemisphere, especially those of declination. From the assemblage and projection of all the observations of this element, Col. Sabine is led to the conclusion, that the system of magnetic ovals in the southern hemisphere is really a double one, completely analogous to that which prevails in the northern; so that the two hemispheres do actually possess with respect to each other a converse or complementary character, indicative of a certain symmetry in the disposal of the magnetic forces, or in the action of their causes.

The situation of the isogonic lines of the South Pacific at the present epoch, as deduced from these observations, and brought into comparison with the best evidence we possess of the situation of corresponding parts of the same lines, or, which comes to the same thing, of lines cutting several of them continuously at right angles, fully corroborates and bears out another general proposition, viz., that the march of the magnetic phenomena in this region of the globe is steady, rapid, and in a *westerly direction*; that is to say, in conformity to what, so far as we have hitherto ascertained, appears to be the general law in every other part of the globe. A magnificent and commanding result, which may be considered as holding the same place in the science of terrestrial magnetism which the precession of the equinoxes does in astronomy, though its laws yet remain to be traced, and possibly some local and apparent exceptions may yet be developed in our attempts to establish its complete generality.

In projecting the lines of equal intensity deduced from the antarctic observations, Col. Sabine has been led to compare them with those theoretically deduced by the numerical interpretations of Gauss's formulæ. They certainly differ considerably, both in form and in the probable situation of the centre of the system of ovals to which they belong (and which surround the magnetic pole in or near the continent of South Victoria). The forms of the true ovals are much more flattened than those of the computed ones, and their centre, so far as may be judged from their general aspect, may differ in local situation from the calculated point by 250 or 300 miles. Without any disposition to underrate the great practical value and importance of this correction, with its train of consequences, we cannot help remarking, that, considering the absence of data at the time when M. Gauss's calculations were performed, this theory may be regarded as having sustained very creditably this remarkable confrontation with the fact. It will be recollected that the difference between the true and calculated situations of the north-western magnetic pole, visited by Ross in 1832, amounted to something more than 200 miles.

British Colonial Magnetical and Meteorological Observations.—The volume of the observations made at the observatory at Toronto in Canada, from its commencement to the end of 1842, has been for some time in the press, and will be distributed at home and abroad in the autumn. The volumes containing the observations at Van Dieman Island, the Cape of Good Hope, and St. Helena, to the same period, are in a very forward state of preparation, and will be printed and circulated with no other delay than such as may arise in the printing and engraving such voluminous works. The volume for Toronto will include the comparison of the simultaneous observations made in the group of stations on the North American continent. The Van Dieman Island volume will compare the observations at Hobart Town with those of the antarctic expedition at many points of the southern hemisphere; the two together representing the magnetic phenomena which occurred over a considerable portion of that hemisphere, on the prescribed days and instants when the observers in Europe, Asia, and America were recording, each at his own station. With St. Helena and the Cape of Good Hope will be grouped the observations made on the same system and with the same instruments by the French observers at Algiers, which have been supplied for that purpose by the kind intervention of M. Arago. Cadiz, from whence observations are also expected, ranks also with this group, which may be viewed as representing the portion of our western hemisphere intermediate between the Falkland Islands and Cape Horn (where the antarctic expedition passed several months) and the North American group collected in the Toronto volume, as well as the European group collected in the *Resultate* of MM. Gauss and Weber.

So much is yet prospective in regard to publication, that comparatively little can be at present ventured in regard to conclusions. The only portion of the observations which is yet before the public, viz. observations on days of unusual magnetic disturbance, 1840, 1841, does, however, afford some conclusions which may be taken as an earnest of the fuller harvest. The most important of these is the fact, shewn in the preface of that volume, of the universality of the disturbances of the higher order. The establishment of so important a general law, on evidence which may be considered to have placed it beyond a question, is a happy augury of what may be expected from a continued system of observation, of which it is the first fruits.

Further, it was shewn from the observations in that volume, that though these great disturbances are universal in their occurrence, yet their magnitude is clearly modified by season, and by other local causes; so that, for example, while the northern and southern hemispheres participate in every great disturbance, the influence of summer in the one, and winter in the other, is clearly traceable.

These are also facts, stated in regard to the periodical march of the magnetic elements at Toronto and Hobarton, valuable in themselves, but yet more so in the evidence they afford of the exact determinations which will be every where accomplished in this branch of the phenomena.

Another conclusion has also been drawn in regard to the great disturbances which will have a more full development in the Toronto volume. It has been shewn, that the effects of a disturbance taking place in all parts of the earth at the same time were not the same as manifested by the movement of the magnetic instruments at all places of observation; thus limiting the distance of the super-imposed force, which produces disturbances, co-instant in respect to time, but differing in respect to direction and intensity at stations remote from each other. The mode of computing the direction and amount of the super-imposed disturbing force from the observations at a single station is also stated.

In the Toronto volume, the term-observations of the three American observatories for the three years ending in December 1842, all shewing the closest harmony with each other, are compared with those at Prague, taken as a type of the European group: the comparison exhibits frequent unequivocal evidence of connexion in many of the larger irregular movements. In such case, the simultaneous movements in Europe and America take place sometimes in the same direction, as by a force operating upon both continents from the same quarter; and sometimes the European and American movements are in opposite directions, as by a force operating intermediately between the two continents. It is obvious, that if the observations were *instantaneous* as well as simultaneous, the locality of the disturbing force might be immediately deducible. Without, however, going further into anticipation of what may hereafter be concluded from observations not yet before the public, there is ground in what is already known concerning them for expressing the hope, that important conclusions will be drawn in respect to the locality of the disturbing causes, especially when the observations made with the most recent magnetometers, constructed to exhibit *instantaneous* effects, shall come to be considered. In our present ignorance of the nature of the causes of these phenomena, we are surely advancing in the proper, legitimate, and philosophical mode of ascending to them by this careful study of their effects.

In meteorology a system of careful observation with compared instruments steadily maintained at every hour of the day and night, could not fail to accomplish the solution of many problems in vain attempted by a large expenditure of desultory labour. The mean quantities, the diurnal and annual variations of the temperature, pressure of the gaseous atmosphere, and tension of the aqueous vapour, with their many concurrent circumstances of wind and weather, must be determined with no remaining uncertainty for each station, if the system be continued in operation for a sufficient time.

By a review of the observations at Toronto, and by their comparison with the similar observations at Prague (which is given in full detail in the Toronto volume [see Col. Sabine's report in our last No.]), it may already be shewn, that by their means we have obtained the leading characteristics, in many respects highly curious and novel to many meteorologists, of a station situated in the temperate zone, and in the interior of a great continent, and that we are able to trace by far the greater part of the phenomena directly to their respective causes. This definite and conclusive character of the meteorological results obtained by the system of observation which we have adopted, appears to be strongly in favour of the extension of the system. By the comparison of such definite conclusions, obtained in different parts of the world, by their points of agreement and of difference, reasonable expectations may be cherished, that we shall speedily be enabled to advance the science of meteorology to a degree unexpected at the commencement of these operations. That the spirit to accomplish this is alive, and that an organisation has now been established, and is recognised,

by which a proper direction and guidance may be supplied to that which individual zeal is desirous to effect, will appear from a consideration of what has passed with respect to the establishment of observatories in Ceylon, Newfoundland, and elsewhere.

New Series of Observations at fixed stations proposed or recently commenced.—As regards the first of the above-named stations (Ceylon), a proposal was submitted, in April of the current year, to the governor of that colony, by Capt. Pickering, of the royal artillery, and Dr. Templeton, assistant surgeon R. A. (the former of whom had been instructed in the nature of the observations and the use of the instruments at Woolwich), for the establishment of a magnetic and meteorological observatory at Columbo in that island, a station of obvious interest and importance. The proposal was most favourably received by his excellency, who recommended it to the favourable consideration of the home secretary, with the additional suggestion of an astronomical observatory, declaring his readiness, if approved, to devote to it local funds adequate to its maintenance in activity, if once established and furnished with instruments. The subject is at present under the consideration of government, and a subject of official correspondence; and in case of a favourable issue, the Royal Society have been applied to for the loan of the magnetometers prepared at the cost of the Wollaston fund for the Hammersfest Observatory, which have never been claimed by the Norwegian government, and which station is, for the present, to be regarded as in abeyance.

A similar arrangement is in progress for Newfoundland, and, indeed, more advanced, the magnetical and meteorological instruments having been sent there with a company of artillery proceeding on their tour of service, the officers of which have been instructed in their use, and who will remain at that very important station probably for five years. Some small expenditure for instruments may possibly have to be defrayed from the grant of the Association to this committee at a future stage of the business.

Arrangements are also in progress, and with good prospect, for a meteorological and in part magnetical station at the Azores.

The German apparatus belonging to the British Association has been altered in some respects to give it a degree of efficiency which it had not before, and has been sent to Dr. Locke at Cincinati, which will in future be another station for the term-observations.

[To be concluded in our next No.]

Mr. Snow Harris's report on meteorological observations at Plymouth was confined chiefly to the anemometers and their registries. There is, perhaps, no department of meteorology in so unsatisfactory a state as that relating to the general course and intensity of the winds, especially in high latitudes; and the question of the periodical movement or circulation of the atmosphere in various parts of the world, is, of all other questions, the least investigated. It is not improbable, from the great regularity of the winds in latitudes but little subject to capricious atmospheric changes, that, even in higher latitudes, a similar regularity may become apparent, in eliminating, by a sufficient number of observations, the accidental interferences with the general course of the atmospheric currents; and that there may exist a sort of trade-wind peculiar to different latitudes, from the poles to the equator. The methods hitherto pursued in the investigation of this interesting question have been very partial; and it was with a view of obtaining more definite and useful results that the British Association confided to Mr. Snow Harris's care the anemometers of Prof. Whewell and Mr. Osler, both of which were theoretically so constructed as either to give at once the integral force of the wind or the elements from which the integral force might be determined. The object of the present report is, to shew how far these instruments are applicable to the purpose, and what they have actually effected, together with some farther notices of the observations on atmospheric temperature and pressure registered during the period the anemometers have been under experiment. The principles of Whewell's anemometer were briefly explained, and the mode of obtaining the integral effects of the instrument, the spaces proportional to which a particle of air would pass over in a given time, and of delineating the path of the wind for any given period of time. The mean annual path obtained is called the type of the wind. The types for 1841, 1842, and 1843, at Plymouth, were exhibited in diagrams. They developed important facts. First, that the general current had been travelling to the north, although occasionally thrown out of the course by disturbances, which formed, as it were, so many knots in its more regular path; but which at last were overcome, and the current again advanced in a more regular way. The type for 1841 presented four of these disturbances—in January, April, June and July, and October and November; the general course of the type being a little eastward of north. In 1842 there appeared still greater deflections, and again four distinct disturbances—in January, March and April, August, October and November; the general course of type deflected towards the west of north. In type of 1843, again four disturbances—in January, April, July and August, and October. The course of this type was first towards the west of north, and afterwards east of north; so that the general resulting direction was nearly north and south. It is worthy of remark, that these disturbances approach to something like a periodical form. It is true, they are not perfectly coincident; but they shew an approximation that renders their dependence on a similar cause highly probable; and as they occur about the periods of the vernal and autumnal equinoxes, and of the solstices, it is not unreasonable to conclude that they result from the peculiar position of the sun at those periods. These disturbances indicated, as instanced in that of the autumn of 1842, a struggle between the general mean direction of the current and the new currents which disturb its path, and point out the necessity of observing the instrument for a long period of time, and not merely for the space of a month or two.

After describing the working of Whewell's anemometer, the mode of observing and of registering the results, and the method of obtaining the mean annual movement of the air for a given place,—Mr. Snow Harris, referring to several tables, directed attention to the following curious, and, if it should be warranted by future observations, most important deduction; viz., that the mass of the air in lat. 50° 21′ N., long. 4° 7′ W. (Plymouth), at an elevation of about 30 feet above the level of the sea, is moving slowly toward the north, at a mean rate of nearly four miles per hour, being occasionally disturbed in this course by the meteorological changes incidental to high latitudes. He added: "Although we cannot, in the present state of anemometry, claim for this result more than a certain degree of probability,—the absolute numerical value of the wind's velocity, together with the general working of the machine, being still open to future correction,—yet the general consistency of the observations of the several years with each other, and the uniformity evinced in the progress of the winds, are such as to entitle the anemometer, and the principles on which the inquiry has been conducted, to some degree of confidence; and there can, he thought, be little doubt but that a more perfect and extended series of observations, in different latitudes, with this instrument, or with some other involving similar elements (integral results), would certainly bring us acquainted with some of the laws of the general movement and circulation of the air over the globe." The consistency of the observations of the several years alluded to above, is evidenced by the following table, shewing the general results and the mean of the three years:—

	1841.	1842.	1843.	Mean.
Direction of wind .	N. 15° E.	N. 12° W.	N. 2° E.	N. 1° E.
Miles per hour .	4·5	4·0	3·0	3·8

The mean direction of the wind and the velocity for the seasons, calculated from the types of the wind, and corresponding to the resultants of the integral effects, are as follow:

	Spring.	Summer.	Autumn.	Winter.
Direction .	N. 10° W.	N. 20° E.	N. 6° E.	N. 6° W.
Velocity .	4·75	3·5	5·0	3·4

By these results, or rather by those of the several tables exhibited in illustration, and contained in the elaborate report (the above being only the result of numerous results and workings, ably and perseveringly discussed and calculated by Mr. Harris), it appears that the greatest resultant amount of wind is found in the spring and autumnal months, at which periods the current advances steadily and more rapidly towards the north. In the summer and winter months the resultant amount of wind is less than in the spring and autumn, and there is less advance made in the general direction of the current.

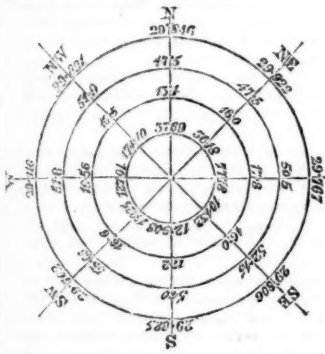
The discussion of the registers of Osler's anemometer, although not complete in all the general details, was yet sufficiently perfect to enable Mr. Harris to institute some general comparisons with the results of Whewell's instrument. It does not at once register integral results, but merely the pressure of the current on a given area; and to arrive at these it becomes requisite to find the velocities due to the several pressures, and then multiply these into the time for which the particular wind blew: in short, a general type of the wind cannot be laid off without very tedious and laborious calculations. These have been made and tabulated; but we must limit our report to the mere comparison of the results of the two instruments, and conclude with the general results of the observations with Osler's instrument. The comparison of the mean velocities of the three years is as follows:

	1841.	1842.	1843.	Mean.
Osler's anemometer. Velocity in miles per hour .	5·2	4·4	3·6	4·17
Whewell's anemometer. Velocity in miles per hour .	4·5	4·0	3·0	3·8

Considering the great complication of this inquiry in an experimental point of view, the above approximation is as close as could be reasonably expected. On examining the direction, however, considerable differences appear to exist. It is, by Osler's instrument, thrown far towards the east. Whether this arises from any defect in the operation of the

instrument, the method of recording the directions, or otherwise by a variation in the atmospheric currents themselves, it is not easy to determine. The situation of Mr. Osler's instrument was about two miles to the west of Prof. Whewell's, and exceeded it in altitude by nearly 100 feet. But whether the difference of situation may account for the discrepancy, we have yet to learn. Still, however, in both cases, the current shews a northerly direction, and, when generalised to eight points of the compass, comes nearer to equality.

The following scheme contains the relative velocity and integral effect of the wind by Osler's anemometer, deduced from tables to eight points of the compass, together with the mean temperature of the air, and the atmospheric pressure attendant on each.



The atmospheric pressure is placed on the outer circle; the mean temperature on the next; then the mean velocity; and lastly, the mean integral effect. Now, by reference to this scheme, it is seen that the atmospheric pressure is greatest on the north-east, and least at the south; and, with one slight exception, it increases, and again decreases, in the order of the eight points of the compass. Thus, beginning at south, where the barometer is lowest, it increases gradually in going by the west to north-east, when it again recedes in passing to the south. The temperature, on the contrary, proceeds in an inverse order to this. It is least on the north-east point, where the barometer is highest, and greatest on the south point, where the barometer is lowest; and if it be traced round the circle, by the north, from its minimum at the north-east, it will be found gradually increasing from the north to its maximum at the south, when it again recedes.

With respect to the relative mean velocities of the different winds, there does not appear to exist such a considerable difference between them as might have been supposed, especially in certain opposite winds. Thus the relative velocity of the north-west and south-east winds is not very different. The same may be observed of the east and west winds. The greatest differences are found between the north and south winds.

The integral amount of wind, with one exception at the west, increases from a minimum at north-east, in passing round the circle by south, to a maximum at north-west; after which it again decreases. It is not improbable, therefore, but that an undue proportion of the tracing of the winds by the machine between the north and west lines has been referred to the north-west.

Such, then, are some of the results hitherto arrived at in the discussion of the registers of the anemometers; and although it is impossible not to consider them as any thing more than mere approximations, yet, and especially as being the first of such a series of observations ever discussed, they must be regarded as replete with interest.

Reverting then to Thursday, the following is the list of papers read in

SECTION A.—(*Mathematics and Physics.*)

1. Brewster (Sir D.), report on the hourly meteorological observations at Inverness.
2. Goodman (J.) on the analogy of light, heat, voltaic and ordinary electricity.
3. Young (Prof.) on a principle in the theory of probabilities; and on diverging infinite series.
4. M'Cullagh (Prof.) on a late attempt to explain the phenomena of elliptical polarisation.
5. Hodgkinson (E.), an account of further experiments on the defect of elasticity of rigid bodies.

1. Sir David Brewster communicated a brief general abstract of the results of the observations at Inverness. They have now been continued for several years, and will on their completion require an elaborate report. The mean monthly curves of temperature, those of daily temperature, and the season-curves projected by Mr. M'Kenzie, approach curiously to the parabola, especially the latter; here and there accidental deviations are evident, but they do not affect the general regularity. An Osler's anemometer has been erected at the station. Some remarkable winds have been already recorded. Sir David recommended the continuance of the observations.

Lord Rosse commented on the intimate connexion of meteorology and astronomy, particularly in reference to telescopic observation. When the temperature of the night was lower than the mean of the week, definition was always bad. He also gave an opinion that the approach to the parabola noticed by Sir D. Brewster was more than accidental.

Sir David suggested to Lord Rosse to attend to the state of the colorisation of the sky; from its colour may be ascertained its purity or condition, which, in regard to the power of reflecting and polarising light, greatly affected definition.

Dr. Scoresby directed attention to the practice of Lord Rosse of testing the focal length, &c. of his speculum between eight and nine o'clock in the morning. This was the period of the mean of daily temperature, when the state of the atmosphere was most steady; and thus he had practically discovered the time which meteorological observations and deductions would have pointed out as the best for testing his instrument.

Dr. Robinson noticed also, as a fact of observation, that the definition of a large instrument was never good when the humidity-point is high. Even in a fog, definition was often tolerable; but when the difference between the wet and dry bulbs of the hygrometer was great, however brilliant the stars, satisfactory definition could not be obtained.

2. Sir David Brewster then stated, that Mr. Goodman's paper had been considered too speculative; but that in consideration of an experiment it contained which may prove of value, he would read it to the Section. The paper itself appeared to be an abstract of several larger papers already published. After many assertions as to the identity of heat, light, and electricity, in their several phenomena, the author remarked that the voltaic fluid produces the expansion of the metal through which it passes. This may be exhibited by an instrument which was thus described:—A glass tube filled with mercury for the purpose of the transmission of the electric current, and copper wire hermetically sealed into each extremity. This forms the bulb of a thermometer. From this tube a stem arises, which is partly filled with mercury; and has an index attached, marked according to the Fahrenheit scale, by immersing the bulb in water at different degrees of temperature. On passing the current of one small voltaic jar through the mercurial column, the mercury in the stem rose about 5°, and descended to former level on disconnexion. The experiment repeated several times gave the same results. In order to prove that the expansion was not due to caloric, Mr. Goodman constructed this instrument, which he calls an electro-thermometer, on a much larger scale, using a tube 2 feet long and 5-8ths of an inch diameter, containing 3 lbs. of mercury. In the bulb below, at one extremity of the tube, was inserted the bulb of an ordinary Fahrenheit thermometer immersed in the mercury of the column, and to the other extremity of the tube was affixed a stem of large bore, partly filled and indexed as in the former instrument. This larger apparatus was not affected by a current from one or two voltaic jars; but employing six in moderate action the mercury invariably rises in the stem from 5° to 6° Fahrenheit, and may be maintained for a whole hour without any change in the inserted ordinary thermometer. Any increase of action in the battery produces a development of radiant caloric, and affects simultaneously the rise of the mercury in each stem; that of the electro-thermometer, however, being at all times 5° or 6° in advance of the ordinary thermometer. Disconnecting the current, the mercury in the stem rapidly falls 5° to 6° to the level of the ordinary thermometer, when both descend gradually together. This electro-thermometer appears to Mr. Goodman well adapted to indicate the quantity in the current of a given voltaic battery; and thus likely to prove a valuable galvanometer, in which, probably, the objections to the ordinary galvanometer will be obviated.

3. Professor Young in his papers, communicated to the Section by Professor Sylvester, stated his belief, that the principle in question in the theory of probabilities is one which has hitherto escaped the observation of, or, at all events, been neglected in practice by, the writers on this subject. It admits of being presented in general terms as follows:—The sum of the separate probabilities of any number of distinct events happening is equal to the sum of the probabilities of one *at least*, together with that of two *at least*, together with that of three *at least* happening; and so on until the whole number is exhausted. By means of this elementary principle the values of compound probabilities, in many cases, admit of being deduced with great facility from the known results of more simple cases. The author concluded with giving examples illustrative of the operation and efficacy of this method.

The same gentleman, in his paper on diverging series, remarked, that Poisson, Cauchy, and other distinguished continental analysts, are agreed upon the rejection of this class of series from the operations of analysis. With these the author coincides in opinion; and opposes those, including many eminent English writers of the present day, as well as the mathematicians of an older date, who defend the use of them, not merely as a valuable aid in euristic researches, but also as satisfying all the conditions of legitimate deduction.

We understood him to except from his censure those series, such as the famous one of Leibnitz, to which Hutton has assigned the

name of neutral, as being neither convergent nor divergent, but holding a middle course. These may be admitted under shelter of the principle of continuity, being viewed as limiting cases of the classes to which they severally belong.

He next took occasion to vindicate the legitimacy of this principle from the objections raised to it by Abel and others, founded on the presumed absurd consequences which flow from its application to certain trigonometrical series, which are in every respect unexceptionable up to a certain limiting value of the variable which enters into them, but appear to fail as soon as that limit is reached. The absurdity consists in the apparent equation which results of a finite quantity to zero. But those who take this view appear to have overlooked that the zero is repeated in an infinite number of terms, all having positive co-efficients; so that, in fact, there results an equation between the specific value of the radix and the indeterminate quantity: zero multiplied by infinity, or nought divided by nought—a conclusion which is *nugatory*, but not *absurd*.

The author concluded his communication, which is only the abstract of a much more considerable memoir on the subject, by stating, that whereas many writers maintain that non-convergent series, though sometimes arithmetically false, are always, or generally, algebraically true; he, on the contrary, is satisfied that such series may be sometimes arithmetically true, but are in all cases algebraically false.

4. The attempt recently made by M. Laurent, and received by the French as satisfactory, to explain the phenomenon of elliptical polarisation on the supposition that the ether consisted not of points but of particles of finite magnitude, Prof. M'Cullagh exposed to be based on fallacious reasoning. M. Laurent had integrated his own functions falsely, and this fact had also escaped M. Cauchy.

5. Mr. Hodgkinson, since the meeting at Cork, had received a letter questioning the correctness of his experiments on the defect of elasticity in rigid bodies, which developed that the sets produced in bodies are as the squares of the weights applied; and from which it appeared that all calculations hitherto made on the strength and elasticity of bodies have been only approximations. Careful repetition of the experiments had confirmed his views; and he hoped yet to be able to discover the law of permanent set. He concluded by saying, that he thought that material once bent never returns of itself to the same state, that it never wholly recovers its elasticity, and that there was a total change of molecular arrangement.

Mr. Faraday drew attention to the fact of low temperature somewhat similarly affecting bodies. When cooled down they become less in size and take a set, and require a tap to regain their former proportions; also when they are enlarged by heat, they do not contract of themselves to their exact original dimensions by their internal power without the aid of external force.

Small forces producing a permanent set in materials is a most important fact. It affects, a member observed, the standard measures, besides most practical calculations. He mentioned also, that if the facts were as Mr. Hodgkinson states, they explained the circumstance, hitherto considered extraordinary, of the bursting of cast-iron guns after having been fired a certain number of rounds. A record is kept of the times each gun is fired, and the gun is generally condemned after 400 rounds. Each discharge must produce a permanent set, increasing on repetition until the mass gives way.

Prof. Robinson thought it useful in this stage of the inquiry also to mention facts. He stated, that the standard metres of France were made of platina, and with all the care possible. After some time the rectangular bars of platina were found to have neither of their four sides like to another. This was attributed to negligence; but Mr. Hodgkinson's facts would explain, that this change of form proceeded from the gradual recovery from a mechanical strain by the internal power of the material, either from change of temperature, or from time. Prof. Robinson farther mentioned the optical properties of glass when mechanically acted upon; its state when suddenly cooled, and its appearance under polarised light, &c. He thought we were on the verge of an elucidation of these and similar phenomena through these experiments on elasticity. He cautioned persons using telescopes in the adjustment of the screws, a little pinching was sufficient to destroy all definition. He recounted a remarkable instance of this, in which the mere loosening of the screws gave clear definition.

Sir D. Brewster instanced the diamond, likening it to drops of gum indurating full of little vacuities, and the effect of these spaces on light when cut and polished. Many diamonds, he said, contained similar cavities; and this was another proof of the vegetable origin of the diamond.

Dr. Scoresby had found, on one occasion, that the torsion-balance, when much twisted, did not return to the zero of the instrument. But leaving it weighted all night, it had returned by the morning to its original position.

Mr. Hodgkinson doubted that it ever returned exactly to the same position.

SECTION B.—(*Chemistry.*)

1. West (W.) on the mineral springs and other waters of Yorkshire.
2. Hunt (R.), some account of experiments on the influence of light on the growth of plants.
3. Daubeny (Prof.) on the occurrence of phosphorite in Spanish Estremadura; and on the existence of fluorine in bones.
4. Bateman (Dr.) on the method of discovering adulteration in tobacco.

1. Mr. West's paper contained the results of twenty years' observation and repeated analysis of the principal mineral springs of Yorkshire; the paper consisted too much of matter of numerical detail to render an abstract either interesting or intelligible. Among the few general deductions contained in it were the remarks, that waters containing carbonate of soda were also, for the most part, impregnated with sulphuretted hydrogen. With regard to the relation between the geological character of different soils or rocks and the springs in their vicinity, Mr. West observed, that those who wished to carry on these inquiries must not look to the broad features of the geology of a district, but must descend to the most minute particulars. He had constantly found that springs within a few yards, or even feet, of each other, were totally distinct in their mineral character. He observed, that the West Riding of Yorkshire offered a most promising field of research to chemists.

Professor Graham agreed with Mr. West as to the fact of sodaic waters being more common than was generally supposed; he had observed that the deep wells of London contain a quantity of carbonate of soda, while the surface-waters contain sulphate and carbonate of lime. The oldest wells have generally the softest water. The reason seems to be, that the water in process of time washes out the soluble matter. He had examined a spring in Kensington Gardens, the water of which was as soft as the Thames.

Mr. Warrington had in many cases observed facts the reverse of those mentioned by Prof. Graham. He had particularly noticed a decrease of saline constituents in situations where the strata were disturbed. In the neighbourhood of Blackfriars the sulphate of lime had increased with time.

A member observed, that in the north of Sheffield he had examined the deposit on the inside of a tea-kettle, and had found it to consist entirely of magnesian limestone.

Mr. Harcourt had seen in the Artesian wells in the neighbourhood of York a greater amount of salts in the deep than in the superficial waters. The sulphate of magnesia and sulphate of lime seemed to take their origin in the red sandstone and pass under the Ouse.

Mr. Hunt said, that the muriate of soda in the waters of Cornish mines was at a minimum at forty fathoms. The largest quantity of muriate of soda was detected in the Treasuran mine; in the Boltrava mine the infiltrated water approaches fresh-water.

2. Mr. Hunt's paper was a notice of some experiments in continuation of the author's former researches. It was shewn that plants growing under the influence of the luminous rays appeared to accumulate a larger amount of woody fibre than those which grew under the influence of the calorific or the chemical principles of the solar beam. There were some remarkable differences noticed in the relative weights of the plants grown from the same number of seeds under the different conditions:—

	Grains.
12 plants growing in the chemical rays, weighing	195
" " calorific rays, "	276
" " luminous rays, "	264

The differences were found to exist principally in the quantity of water the plants contained; as after perfect stove-drying the per-centage of woody fibre left from each set was as follows:—

Those grown in the chemical rays . .	7·16
" " calorific	7·25
" " yellow	7·69

Notwithstanding this remarkable feature, Mr. Hunt states that all his experiments go to confirm his views that light is injurious to healthful germination, and that it interferes with the growth of the young plant. Plants removed from the garden in a fresh and healthy condition perished under the yellow rays, whereas they grew and flowered under the action of the blue and red rays.

Professor Grove wished to ask Mr. Hunt for the evidence upon which he founded his opinion as to the distinct character of the chemical principle of the solar beams, "energia," as it was called, from light and heat? whether he had succeeded in insulating it? whether the maxima of effects produced by it on the growing plant and on photographic compounds were coincident?

Mr. Hunt then proceeded to explain, that the impressions made by the solar spectrum upon photographic agents invariably shew that the minimum of chemical power was to be found at the maximum of luminous influence; and that it rapidly increased to its maximum as light was diminished to its minimum. He also stated, that by means of absorbent solutions he was enabled to pass nearly the whole amount of light filtered, as it were, from the chemical force; and that the chemical principle "energia" would permeate in full power a solution which would abstract nearly all the luminous rays. He likewise said that there

was a slight difference in the points of maximum action in the case of the growing-plant and the photographic preparation; in the former being between the blue and yellow, and in the latter at the mean blue ray.

Dr. Daubeny objected (as we have already done in a former *Gazette*) to the term "energia;" preferring, for several reasons, the generally-received term, "chemical ray."

3. Professor Daubeny's paper was similar in effect to that which he read at the Royal Institution and the Chemical Society in London; and was principally observable here from the discussion to which it gave rise on the action of ammonia on vegetation, and other points of agricultural interest as connected with manures. Professors Graham, Daubeny, and Playfair answered several questions put to them on these subjects; but the exact operation of ammonia on the roots or (?) leaves of plants, of gypsum as an adjunct to it in composts, and other practical particulars, seemed as yet to require further investigation. [By the by, we have missed much from this meeting, and from this Section, Professor Johnston, who is so competent an authority on all that concerns the chemistry of agriculture.—*Ed. L. G.*]

4. Dr. Bateman's paper was based on an error—viz., that as tobacco contained some 50 per cent of soluble and 50 per cent of insoluble matter, if adulterated with a material, say of 35 insoluble and 15 soluble matter, the difference in the whole would mark the extent of adulteration. But the answer is, simply, to suppose the adulteration to preserve the same relative proportions as the substance adulterated, and there could be no detection. Dr. B., however, contended that the test had been successful, and that other more ingenious modes of fraud might be met with similar efficacy.

SECTION C.—(*Geology and Physical Geography.*)

1. Milne (D.), report of the committee for registering earthquakes in Scotland.
2. Mantell (G. A.) on a species of unio from the Wealden strata.
3. Ansted (Prof.) on the means by which the preservation of mining records may be best secured.
4. Forbes (Prof. E. B.) and Ibbetson (J. L.) on the cretaceous and tertiary formations of the Isle of Wight.
5. Oldham (T.), report of observations on subterranean temperature; and on the occurrence of marine shells in the gravel of Ireland.

1. Mr. Milne's report continued from former years the record of the earthquakes which had occurred at Comrie and other parts of Scotland from August 25, 1843, to the 12th of last June, and including a notice of the phenomena experienced at Stamford on the last date. A conversation ensued, in which the Marquis of Northampton, Sir H. De la Beche, Prof. Sedgwick, and Mr. Featherstonhaugh participated; and reference was made to several earthquakes in different parts of the globe. Mr. Warburton, the chairman, as stated in our last, especially referred to the late Lady Callcott's account of the memorable shock in Chili, 1822, of which she was a witness. On this occasion three distinct oscillations were felt; and it was believed that there was a permanent upheaving of the land in consequence. Though the barometrical, thermometrical, and other observations made in Scotland, were so far useful, he suggested, for the more perfect understanding of these convulsions of nature, that a more extended apparatus should be (and more universally) employed to ascertain the wave of velocity, and the amount of the earth's upheaving, which had hitherto received only partial registry and consideration.

2. Mr. Mantell's description of the unio, which he supposed to be new, was stated by Prof. E. Forbes to have been brought before the Royal Geological Society by Dr. Fitton.

3. Prof. Ansted's paper was fully reported in our last, p. 634.

4. The models to which this paper related were constructed by Capt. Ibbetson, from trigonometrical survey, in order to illustrate the sections of the cretaceous and tertiary systems on the S.E. coast of the Isle of Wight. They are three; the first exhibiting the section of the lower greensand between Blackgang chine and Atherfield point, in which that formation is grouped into three divisions, depending on mineral character and the consequent modifications of the distribution of their organic contents. The details of these had been previously laid before the Geological Society, in a paper written with a view to inquire into the Neocomian question, the result of which was to bear testimony to the correctness and prior claim of the important researches of Dr. Fitton. On the first of the models are also displayed the sections of the gault and of the upper greensand at St. Catherine's Down. The second model exhibited the corresponding section of the lower greensand, gault, and upper greensand between Luccomb and Sandown. In this section the beds correspond throughout the lower and middle divisions of the lower greensand, but the uppermost exhibits towards its base zones of gryphaeæ and terebratulæ, which are absent at the former locality. Generally speaking, the upper portion of the lower greensand in this section is much more fossiliferous. The third of the models displays the whole of the strata of the cretaceous system, as seen in the Isle of Wight, between Sandown and Whitecliff bay, and the whole of the eocene tertiary at the last-named locality. The strata of the lower greensand in this section correspond to those at Atherfield, but are much thinner, especially the clays of the lower part, and, with the exception of the *Perna Mulleti* bed, much less fossiliferous. The gault is free from fossils. The upper greensand corresponds nearly with the section at St. Catherine's Down, presenting successively sands and clays, under the names of chloritic marl, silicious bands, firestone and freestone, malm and rag, the malm in a 3-feet bed, highly fossiliferous, surmounted by 26 feet of malm and rag passing into chalk marl. The thickness of the gault in this section is about 50 feet, of the upper greensand 100 feet, of the chalk marl and hard chalk 200 feet, and of the chalk with flints, the uppermost portion of which is absent, 200 feet. Resting on the denuded surface of the chalk, and heaved up almost perpendicularly, at Whitecliff bay are seen the strata of the London clay, consisting, at first, of a succession of marine clays and sands, succeeded by clays and sands apparently deposited in brackish water, which are divided from the marine by a bed of freshwater origin, and which are succeeded by a series of freshwater beds of various mineral characters, in the midst of which a thin stratum of marine or brackish origin suddenly appears. The measurements of all the strata, both tertiary and cretaceous, and tables of their fossil contents, were laid before the meeting.

Reviewing the strata deposited from the cessation of the Wealden to the prevalence of a fresh-water eocene formation in this locality, the authors laid stress on the following facts in the local history of organised nature during that long period. 1. That the seas in which the lower greensand was deposited, and which occupied the area described, in consequence of the sudden subsidence of the great Wealden lakes, presented from the very commencement a fauna truly marine, and most of the members of which began their existence with the commencement of the cretaceous era in England. Almost all the animals which appeared were such as were new to the oceanic fauna; and among them were many forms representative of other species which had existed in the oolitic ocean. 2. That this fauna continued, though apparently diminishing in consequence of extinction of species from physical causes, until the commencement of the deposition of the gault, when a new series of animals commenced, among which a few species which had previously existed lived on, but the greater part of which were either representative or peculiar forms. The same system of animal life appears to have continued throughout the remainder of the cretaceous era in this locality, although great differences in the distribution of species and many species local in time occur, depending on the very great change in the mineral conditions of the sea-bottom during this epoch. The chalks proper present especially many peculiar species, but these appear rather to owe their presence to the zone of depth in which they lived, than to being members of a new zoological representation in time. The authors called attention to the assemblage of minute corals, sea-urchins, terebratulæ, and spondylus spinosus, in that part of the Culver section at which is seen the junction of the chalk with flints and the hard chalk, as especially indicative of a very deep sea, and as corresponding to the characters which mark a very deep sea fauna at the present period. 3. That in the tertiary formations which succeed there is an entirely new fauna, distinct as to every species in this locality, though elsewhere linked with the cretaceous strata last alluded to by the presence of that remarkable mollusk, the terebratula caput serpentis, which lives even at the present day. Of this fauna, which did not appear until after a considerable bed of mottled clays, without traces of animal life, had been deposited, the commencement is similar to the commencement of the faunæ of the two cretaceous periods already described; viz. by a series of clays containing numerous peculiar mya-form shells, pectunculi, ostreæ, and their associates. The earliest fossiliferous bed at Whitecliff bay is a most remarkable one, consisting of a thin stratum almost entirely composed of a species of shell-bearing annelid, the ditzupa, (dentalium planum of Mirs. Conc.) which appears to have lived but a short specific life in time, and to have suddenly disappeared. In the midst of these beds, strata charged with myriads of foraminifera, probably indicating some change in the sea's depth, appear and cease. The sudden conversion of the sea into a fresh-water lake, indicated by a stratum of paludina clay, its return into a brackish state, and the consequent re-appearance of certain marine animals, its re-conversion into a fresh-water lake thronged with myriads of fluviatile mollusca, and the almost momentary influx of salt water during that period, which lasted only long enough for a race of oysters to live and die away,—all render the tertiary strata in this locality highly interesting.

From the great zoological break between the eocene and the chalk, the authors conclude that a third or uppermost cretaceous formation, characterised by a fauna which would link the middle term of the system with the lowest term of the tertiary, has disappeared in this locality; whilst they regard the portion of the cretaceous system there present as composed of two divisions, equivalent in time; the older consisting of the lower greensand, and the upper, or later, forming one system, composed of the gault, upper greensand, and chalks.

The zoological epochs, then, exhibited in the Section, commented upon, and modelled, are three: 1st, that of the lower cretaceous system; 2d, that of the middle cretaceous system; and 3d, that of the lower or eocene tertiary system.

5. Mr. Oldham's observations concluded the business of the day.

SECTION D.—(*Zoology and Botany.*)

1. Blackwall (J.), report on structure and functions of the araneidæ.
2. Hogg (J.), catalogue of birds of south-eastern Durham and north-west Cleveland.
3. Allis (T.), remarks on some peculiarities in the flight of birds, especially as that is influenced in some species by the power they possess of diminishing and adjusting their own specific gravity.
4. Strickland (H. E.), report on the vitality of seeds.
5. Allman (Dr.) on a new genus of parasitic arachnidans.
6. Peach (E.) on the marine zoology of Cornwall.

1. The report on the araneidæ was partly read and entered upon by the secretary, Dr. Lankester, and partly reserved for consideration hereafter.

2. Mr. Hogg's catalogue, of much local interest, but very ill calculated to be read with any effect at a meeting like this, needs no further notice than we have already bestowed upon it.

3. Mr. Allis' paper contained many popular remarks on the flight of birds, and the position of the centre of gravity, the axis of motion, and the development of the pectoral and other muscles, &c., which enable some to take rapid flights, others to be almost perpetually on the wing, and others only to flit about, as woodpeckers and wagtails. The most curious portion related to birds which spend their time either on land or water.

A singular fact was mentioned of the guillemot and some other species of sea-fowl, that if taken inland, only fifty or a hundred yards, they did not possess the power of *flying* to the sea, but could only half run, half paddle their way back; as soon, however, as they got into the atmosphere above the water, they could take long continuous flights.

4. Mr. Strickland's report on the vitality of seeds did not add much new matter to this investigation, so much discussed at the Cork and preceding meetings.

5. Professor Allman read to the Section a description of a new genus of parasitic arachnidans. The subject of this communication was discovered by Dr. Belingham, of Dublin, in the posterior nares of a seal (halechærus gryphus). It is referable to the section *gamasei* of the tracheary arachnida. Professor Allman gave to the new genus the name *halarachne*, in allusion to its singular habitat.

6. Of Mr. Peach's practical paper on the marine zoology of Cornwall, the following is an abstract:—

Crested Blenny.—The author described several specimens of this hitherto rare fish, which he had found on the coast of Cornwall, varying in length from two to eight inches, and which had each two pairs of plumose appendages on the head, with the exception of one, and nearly all had as well similar appendages on the first three or four rays of the dorsal fin, differing also from those described in Yarrell's *British Fishes* in some other respects, making it a question whether they are not a new species.

Nereis tubicola.—This interesting annelid next engaged his attention, and was minutely described from specimens he got alive and kept so some time. He also mentioned another annelid, which is invariably found in the same shell with the hermit crab, which varies greatly in length and size, and is sometimes ten inches long.

Doris.—He had noticed that great numbers of one of this description of animals had come in shore in the spring and deposited their ova on the rocks, and he had succeeded in rearing the young in great numbers; these young were invariably provided with a nautilite shell, which, no doubt, is thrown off soon after their escape from the nidus: he likewise noticed that the young of the *buccinum reticulatum* is also found in a similar nautilite-like shell, with similar appendages and similar habits.

He next described a holothuria with *twenty tentacula*, a link which has been so long wanted to fill up the hiatus in the history of this singular race: it is rather abundant in deep water, and sometimes a foot in length, and is called by the fishermen of the coast of Cornwall a "nigger" and a "cotton-spinner," the former from its *black* appearance, the latter from its ejecting threads which become elongated into long and very fine threads of great tenacity; these threads no doubt are intended to annoy any enemy which might attack them, as they adhere firmly to any thing they may come into contact with; they are furnished with *four rows of suckers*, and covered with spine-like processes, and when the tentacula are withdrawn have very much the appearance of a small cucumber; they vary in length from two inches to a foot. He minutely described their habits and peculiarities, proving satisfactorily that it is new to the British fauna.

He also mentioned at the end of his paper, that the *boar fish* is quite common off the Cornish coast, the *plain bonito* not uncommon, and that a large specimen of the *maigre* had been captured. He produced likewise two new calcareous corallines, which Dr. Johnston of Berwick-on-Tweed and R. Q. Couch, Esq. of Penzance, both celebrated writers on zoophytes, have pronounced new and good species.*

Professor Forbes felt pleasure in hearing the paper just read, and although there was much interesting information about the *doris* and *nereis tubicola* (the latter from the carelessness of observers had been overlooked), they had been noticed before; as regarded the fishes, he left those with Mr. Yarrell. Of the holothuria with twenty tentacula, he had long expected to hear; this was *decidedly new to the British fauna.* About the zoophytes, as Dr. Johnston had pronounced them new, that authority was sufficient to stamp them as such. As regarded the *cypræa moneta*, he must doubt greatly: it was a circumstance so much at variance with all geographical distribution, that farther researches and discoveries must be made to produce conviction.

SECTION E.—(*Medical Science.*)

1. Erichsen (J. E.) on asphyxia.
2. Hemming (G. D.) on a peculiar disease of the tongue.

The Medical Section has not done enough of a publishable nature at this meeting to induce us to go into daily details (Monday being adjourned); but, at the close of our report, we will give a summary of its proceedings.

SECTION F.—(*Statistics.*)

1. Porter (G. R.) on the mining industry of France.
2. Gilbert (Mrs. D.) on agricultural schools.
3. Sykes (Lieut.-Col.) on the mortality of Calcutta.

1. Mr. Porter's paper was given at length in our last No., p. 636.

2. Mrs. Gilbert's benevolent example and successful efforts in this good cause have so frequently occupied our pages and challenged our most earnest support, that we shall not now fill them with repetitions either of the plans, their happy results, or the universal emulation they so well deserve.

3. The conclusions from Col. Sykes' paper were, that the rate of mortality was greater among the Hindoos than the Mahomedans, and that the Roman Catholics in Calcutta were particularly subject to disease and death. In a return for a specified period, the number of deaths amongst the Roman Catholics was 10·56 per cent—of the Hindoos, 5·46 per cent—and of the Mahomedans, 2·29 per cent. The average of all classes was 3·98 per cent; and for a period of twenty years the average deaths were 3½ per cent on the population generally. Among the military the proportion of deaths between single and married men was as 3·77 per cent of the former to 2·74 of the latter.

SECTION G.—(*Mechanics.*)

1. Wylson on a new scantlometer.
2. Deane (Sir T.) on the construction of buildings for the accommodation of audiences.
3. Hodgkinson (E.) on the law of defective elasticity of iron and stone.
4. Russell (S.), report on the form of ships; and on the resistance of railway-trains.

This Section does not assemble in such force as it has done in the great manufacturing towns,—Glasgow, Birmingham, and Manchester, for instance; but some of its discussions are of considerable usefulness, though rather continuations of old propositions than novelties in the progress of mechanical science. Indeed, the general aspects of this meeting differ from those of later years in the predominance of individuals not connected with industrial, manufacturing, and mercantile pursuits, but more addicted to the purer sciences. Yet, though all the associations of ideas with the city of York are of a literary and antiquarian, rather than a scientific and mechanical kind, there is no appearance of any greater leaning to, or acquaintance with, Literature, Learning, or the Fine Arts; though so many well-educated persons are present. It would seem as if Science was, to a certain degree, jealous of, if not abhorrent to, other refined and civilising objects, and that a single occupation of the mind was enough to absorb all its powers. It is truly remarkable to see how little the generality of scientific persons know beyond their own limited sphere of observation.—*Ed. L. G.*

1. Mr. Wylson's invention was to provide a better means of measuring the depths and thickness of timbers used in buildings, and particularly joists and rafters. It was described as an exceedingly useful production, and illustrated by mathematical diagrams to shew its application.

2. Sir T. Deane's observations were given extemporaneously, and followed up Mr. Scott Russell's paper at Cork last year, which he said had led to many valuable improvements in his construction of buildings in that city. Sir Thomas promised to continue the subject.

3. Mr. Hodgkinson's remarks were also impromptu (from the cause we mentioned Saturday week), which will be more fully reported in Section A.

4. Mr. Scott Russell made his final report on the form of ships, which related to a yacht built in London, in the wave-form recommended by the British Association committee, which yacht had displayed a superiority of construction in sailing with others possessing great advantages.

FRIDAY.

SECTION A.—(*Mathematical and Physical Science.*)

1. Sabine (Col.) on the meteorology of Toronto in Canada, and its comparison with that of Prague in Bohemia.
2. Scoresby (Dr.) on a new process of magnetic

* He exhibited a specimen of the *cypræa moneta*, money-cowry, which had been trawled up with the animal in it off the Land's End.

manipulation, and its action on cast-iron and steel bars.

3. Lowman (—), description of the orthochronograph.

4. Forbes (Prof. E.), account of an attempt to establish the flexibility of glacier ice by direct experiment.

1. The remarks and comments of Prof. Whewell, Mr. Snow Harris, Dr. Robinson, Lord Rosse, and Prof. Phillips, as to the value and the ability displayed in the discussion of the Toronto and Prague observations, by Col. Sabine, fully justify the space we gave to it in our last.

2. Dr. Scoresby in magnetic manipulation had found it difficult to give to hard steel bars the full power that he considered they ought to receive. He thought this may arise from the production of small waves and numerous poles, and therefore no combined or satisfactory single effect. It then occurred to him, that, by the interposition of a substance capable of the magnetic condition between the poles of the traversing magnet and the steel bar, these smaller waves would be levelled and the fullest power developed. He tried this, and with perfect success; and he ultimately found soft iron to be the best material for the purpose.

3. The orthochronograph is a meridian instrument consisting of two discs, a larger and smaller, one above the other, with a hole in the upper to allow the light to pass through and fall on the outer graduated circle of the lower one. In the course of the remarks, which were not very favourable to the instrument, a portable dial, the Swiss shepherds' only clock, was exhibited, and Dent's dipleidoscope mentioned with approval.

4. The relation of Prof. Forbes's recent experiments to establish his views in regard to the nature and motion of glaciers led to a discussion, which after two hours was adjourned, and was continued for upwards of three hours on Saturday. Scientific readers are fully aware of the opinions entertained by Prof. Forbes and by Mr. Hopkins; the first considering glacier-ice a plastic or viscous body, and accounting for the motion of glaciers as a semi-fluid substance by molecular displacement, or the sliding of the mass of the glacier over itself; the latter regarding glacier-ice as a solid though not rigid body, moving by the force of gravity over its bed lubricated by the constant partial melting of the bottom, possessing a degree of elasticity, bending to a certain extent, yielding to the pressure of the upper portions, giving way, passing on after dislocation, and leaving transverse and longitudinal fissures in the line of tangential forces. It will, therefore, be unnecessary to enter into the details of the arguments, and the more especially as the discussion ended nearly where it began, and as the arguments doubtless will be more carefully given in print. The recent experiments, however, of Prof. Forbes fully support his published opinions. These were conducted in August last on the glacier itself, the Mer de Glace of Chamouni, and consisted of a series of points being marked on the glacier, and their action observed for a given time, with a theodolite used like a telescope, and graduated to tenths of inches. The first experiment comprised two stations only, one 300ft. the other 1300ft. from the side. In twenty-four hours the latter had moved onwards fourteen inches, the former only three inches, and this without any open longitudinal fissure whatever, evidencing an increase of rapidity of progress in the centre. The second experiment consisted of a series of points 30, 60, and 90 ft. apart, extending to 180 ft., and lasted 17 days without any considerable dislocation being observed, the relative movement of the first three stations, for instance, being, to a given observation in inches, as 12·4, 24·9, 34·9. Another, on a more minute scale, a recording of 4·5 stations, gave the same result — a uniform and continuous motion, attributable only to the specific plasticity of the ice, no separations of parts, sensible to the eye, taking place. Prof. Forbes did not look for mathematical progression, particularly under the difficulties of observation, and because the ice is more yielding in some places than others. Models exhibiting the motion of white and coloured plaster of Paris down an inclination, according most closely to the structure, blue bands, &c. of the glacier, were shewn to the Section, and, for the time at least, appeared to carry conviction to the majority present of the viscosity of glacier-ice.

SECTION B.—(*Chemical Science.*)

1. Harcourt (Rev. W. V.), report on a hydrogen-furnace for vitrification and other applications of high heat in the laboratory.

2. Matteucci (Prof.), the measure of nervous force developed by a current of electricity.

3. Exley (Rev. T.) on the alternate spheres of attraction and repulsion noticed by Newton, Boscovitch, &c., and on chemical affinity.

4. Tilley (—) on a peculiar condition of zinc produced by a long-continued high temperature.

5. Joule (J. P.) on specific heat.

1. The apparatus exhibited and described by Mr. Harcourt consisted of a wrought-iron tube, larger but somewhat similar to that used in Thelorier's apparatus for solidifying carbonic acid gas. A pipe leads from this tube to a small chamber containing chloride of calcium, or some other ingredient for drying gases, and to this are attached jets of various shapes for the issue of the gas that may be required for heating platina crucibles of different sizes and shapes. Some of these were very ingeniously constructed for the purpose of producing an equable temperature. The hydrogen gas is generated in the large vessel by a given quantity of zinc and diluted sulphuric acid, and allowed to reach a pressure of twenty-five atmospheres; it is then ignited, and will give a good white heat for twenty minutes. Mr. Harcourt shewed some specimens of phosphate of antimony and other substances vitrified by this furnace, which were examined with much interest.

Mr. Faraday said that chemists were greatly indebted to Mr. Harcourt for the pains he had bestowed in bringing to perfection this valuable apparatus.

A member inquired its cost.

Mr. Harcourt said, that as there shewn, it had been very costly, about 150*l.*, but that the second chamber and the joints necessary for fitting it, which were the most expensive parts, could be dispensed with in practice, a piece of dry sponge being placed in the neck of the gas-generator to absorb moisture.

2. The results of Professor Matteucci's paper were contained in our Paris Letter in No. 1445: the communication created much interest in the Section-room; it was given in French by M. Matteucci himself, and then explained in English by Professor Grove, who was in the chair.

3. Mr. Exley's paper was of a speculative character, containing a classification of different descriptions of atoms, much too vague and misty for the present state of physical science.

4. The specimens of zinc exhibited by Mr. Tilley had a peculiar granular appearance, incapable of accurate description; they were considered curious instances of change of form in an elementary body by the influence of continued heat.

5. Mr. Joule shewed some tables of the numerical relations between the specific heats of various bodies and their atomic weights, consisting partly of extracts from other authors, and extending the law of Dulong and Petit.

SECTION C.—(*Geology and Physical Geography.*)

1. York (the Dean of), critical remarks on certain passages of Dr. Buckland's Bridgewater Treatise.

2. Featherstonhaugh (G. W.) on the excavation of the rocky channels of rivers, by the recession of their cataracts.

3. De la Beche (Sir H. T.) on ordnance geological maps, and on a section near Builth.

4. Maconochie (Capt. R.N., K.H.) on the physical character and geology of Norfolk Island.

5. Hall (E.) on the midland coal-formation.

1. The first paper in this Section, as would be seen in our last No., was the Dean of York's exhibition as a reformer of geology; which, like most things of the least utility, attracted a crowded audience to witness a scientific tournament. The dean, as was known from his attacks during four or five years, has considered the facts and deductions of our geologists to be inconsistent with the Mosaic account of the creation; and now, when he had got them on his own —— hill, was determined to give them a thorough setting down, and, incautiously as we think, obtained leave for that purpose.

The debate elicited nothing worthy of notice for the cause either of religion or science; and the dean's effusion, in the shape of a sixpenny pamphlet, with which the town was deluged by the time his speech was spoken, might as well have been left to that form of circulation. Prof. Sedgwick's demolition of the rev. gentleman's arguments was worthy of the hammer of Thor, instead of that of a mere modern chipper of gneiss, sandstone, and chalk. He defended natural truth, and shewed that the more we knew of it, the more we must be convinced of the wisdom of the Deity, and have faith in the verity of gospel history, and the genuine principles of religion. He demonstrated the dean's ignorance of geology (which lent a helping hand to revelation), and, among other proofs, his hypothesis of monstrous creatures being swept down from the land by torrents of rain to mingle with strata and fishes thrown up by submarine volcanoes* (such is his theory!), being supported by the cases of three animals, one of which *mousters* was the size of a *guinea-pig!*

With this brief notice we believe we have done enough for a cosmogonical disputation, the prototype for which may be read in the *Vicar of Wakefield;* and which had about as much to do with "the advancement of science" as the ball on the following Monday evening.

2. Mr. Featherstonhaugh's communication expounded the molar processes by which rivers excavated their rocky beds and formed their channels, from observations he had made on the Falls of Niagara and St. Anthony, where they could be seen and studied with advantage. Some fine drawings illustrated the paper; and the retrocession of the famous cataract first named above was instanced as an example of the natural consequence general to all similar formations.

3 and 4 were able papers upon localities which offered features of much interest to geology, but no results which require to be detailed; and

5. Mr. Elias Hall extended our information relative to the coal-strata, particularly in the country around — Yorkshire, Derbyshire, Lancashire, &c.; upon the value of which he was deservedly complimented by Prof. Sedgwick and Mr. Warburton.

* Through the granite crust, which he supposes was the eggshell of the world; in which every thing was made at once, and nothing had been added or taken away.

SECTION D.—(*Zoology and Botany*).

1. Portlock (Capt. R.N.) on the marine zoology of Corfu.
2. Alder (J.) and Hancock (A.), report on British nudibranchiate mollusca.
3. Allman (Prof.) on a new genus of mollusca nudibranchiata.
4. Forbes (Prof. E.), notice of progress of dredging-committee.
5. Goodsir (H. D. S.) on the reproduction of lost parts in the crustacea.
6. Meynell (T.) on the fishes of Yorkshire.

1. Capt. Portlock's paper, read by Prof. E. Forbes, gave a minute account of shells, fishes, &c., which the gallant officer had dredged up off the coast of Corfu and the Ionian Isles. From the descriptions, the specimens appear to be very beautiful or interesting, and many of them unknown; but the absence of scientific details made it rather the announcement of a store to be hereafter explained and classed, than an important contribution to natural history.

2. The report continued the information in this branch of inquiry; and

3. By Prof. Allman, on a new genus of the same nudibranchiate mollusca, which he had discovered in a salt-marsh on the south coast of Ireland. The subject of this communication possessed certain striking peculiarities of structure, and was of high interest from its relations. Prof. Allman imposed upon it the name *Alderia*, in honour of the distinguished zoologist (named in No. 2) now so actively and successfully engaged in the investigation of the nudibranchiate mollusca.

4. This report consisted of two parts: 1. Of the records of a series of dredging operations conducted round the coasts of Anglesea in September 1844 by Mr. M'Andrew and Prof. E. Forbes, exhibiting the distribution of the marine animals procured in various depths, down to 30 fathoms, and the state of the sea-bottom in the localities examined. Among the more interesting facts recorded in these papers were the following:—Rolled specimens of *Purpura lapillus*—a shell which lives only above low-water mark—were found in 25 and 30 fathoms water, on the gravelly bottom of a line of current at the distance of 8 miles from the nearest shore. In the same line of current, it was found that the few mollusca which lived among the coarse gravel, such as *Modiolæ* and *Limæ*, had constructed for themselves nests or protecting cases of pebbles, bound together by threads of byssus; and one species, the *Modiola discrepans*, had made its nest of the leaf-like expansions of *Flustra foliacea* cemented together. The attention of the dredgers was directed, among other subjects, to the distribution of *Serpulæ;* and the results of their researches were confirmatory of the statements recently advanced by Dr. Phillippi of Cassel—namely, that no dependence could be placed, even as to the genus, on the shell of a serpula, perfectly similar shells being constructed by animals of different genera. Thus they found all the serpulæ of a particular form, in 12 fathoms water, to be a species of *Eupomatus;* whilst exactly similar shells, in 20 fathoms, proved to be the habitations of a species of the genus wanting opercula, of which *S. tubularia* is the type. All the triangular serpulæ they met with were *Pomatoceros triqueter*. In 12 fathoms, at the entrance of the Menai Straits, they dredged the shell of *Helix aspersa*, a land-snail, covered with barnacles and serpulæ, and inhabited by a hermit crab. 2. Of a series of dredging observations made on the north coast of Ireland by Mr. Hyndman.

5. Mr. Goodsir exhibited several peculiarities in the reproduction of bony covering by crustacea, some of which presented very curious appearances. A long conversation ensued on the subject; and dwellers on the seashore had all instances to relate of oysters, lobsters, crabs, &c. &c., with their strange transformations when nature or accident cast or injured their shells. Their outside bones hardly conformed to the inner bones of other animals.

6. Was a very long and very dry catalogue (fit for printing, and not for reading) of the fishes of Yorkshire, of which the author enumerated 250 species. Their food and habitats were described from observation, and therefore of some interest.

SECTION E.—(*Medical Science.*)

Reserved. The Ethnological Section also met, of the proceedings of which we shall render a report, probably when we have got rid of the pressure of the seven Sections.

SECTION F.—(*Statistics.*)

1. Laycock (Dr.) on the sanitary condition of York during the years 1839-43.
2. Sykes (Col.) on the statistics of Frankfort-on-the-Maine.
3. Copperthwaite (W.) on the statistics of Old and New Malton.
4. Dury (Rev. C. T.), hints on the improvement of agricultural labourers.

1. Dr. Laycock's paper (already, we believe, entirely or principally circulated in print) extended his observations on the sanitary condition of York two years farther, namely, 1842-3, than he had done before. His researches were conducted in connexion with the commissioners for large towns; and tended to shew that York was an unhealthy place, ill-drained, and, in its lower parts especially, exposed to sickness and mortality. Various causes were assigned for this unpropitious state of things, among which were, the nature of the soil, the impurity of the water, the prevention of free ventilation by the walls and bars, and the old materials and construction of the mass of the houses.

These data were canvassed by Mr. Chadwick and other members, and it is to be hoped that, the evils being ascertained, remedies may be found for them.

2. An interesting paper on the statistics of a foreign populous town, affording both information for comparison and hints for improvements.

3. Occupied above two hours in reading, and would occupy nearly a *Literary Gazette*. Its outline is tolerably given in the local journals, from which we condense this very brief abstract.

The local and geographical situation of Malton, its extent, boundary, river, &c., were described; and also the statistics of its streets, number of houses in each, the number of gaslights, the value of its houses, &c. The population in 1831 was 5357, whilst in 1841 it had declined to 5231. It appeared that in 1810 the illegitimate children averaged 5·3 per cent; in 1820 they were 6·7 per cent; in 1830 they were 8·7 per cent; and in 1840 they reached 9·4 per cent. The paper proceeded to give details of the occupations of the inhabitants in 1831 and 1841; the rate of wages paid to those employed in agriculture and handicraft; a full description of the agriculture in the parishes of Old and New Malton; the quantity of acres under the several descriptions of culture; produce of the farms; the rents paid, which were stated to average 1*l.* 15*s.* an acre, and, including taxes, &c., 2*l.* 0*s.* 6*d.*; the rotation of crops; the produce per acre; the working power; live stock; produce of butter, wool, &c.; drainage; description of soil, &c. It was stated that the tenants under Earl Fitzwilliam, the principal landowner, hold at will, but that some farms have been in the occupation of the same family for above a century. The average of the holdings is 70 acres. Up to 1807 the rents were very low; in 1809 a valuation was taken, and the rental of the land was advanced four-fold nearly. In 1822 a reduction took place of 25 to 30 per cent, and it had continued at that rate to the present time. The allotment system had been amply tried in Malton. There were 41 who occupied each a quarter of an acre; 54 who rented half an acre; and 26 who held an acre. There are 23 public-houses in New Malton, and 1 in Old Malton; also a temperance-hotel and some beer-shops. The paper then noticed the Temperance Society, which was stated to have had a beneficial effect, the several benefit societies, the savings' bank, the charitable institutions of the town, the extent of pauperism, the cost of relief under the old and new systems, the income and expenditure of the working-classes, entering minutely into their domestic economy, the extent of its markets, and the state of education. It appeared that there were 1417 children between the ages of 3 and 15 years; of this number 1120 were in course of education. The paper next noticed the Mechanics' Institute, the public libraries, news room, the religious persuasions of the inhabitants, and their places of worship.

Mr. Chadwick eulogised the paper; and Mr. Porter observed that it was highly valuable at the present time, when Government were anxious to procure statistics of agriculture. Although they had not yet determined on the machinery for an official inquiry, he hoped before another year that something of the kind would be in operation. It would strengthen the Government in their intention when they saw the thing could be done so well as undoubtedly this was.

Mr. Perkins expressed his great satisfaction with the paper, which he hoped would be made perfect by some information as to the nature and extent of crime in that locality.

4. The only novel feature in Mr. Dury's paper, which was full of benevolent suggestions for the benefit of the agricultural labourer, was the recommendation of a large common room for eating and recreation, such as is now contributing so much to the welfare of the class around Durham Park, near Barnett, where an establishment of this kind has been completed by Capt. John Trotter. By the description, it seems to be a model for every friend and landlord to copy for the sake of their humble dependants.

SECTION G.—(*Mechanics.*)

1. Bowness (E.) on a plan for drawing coals from pits without ropes.
2. Byrne (O.) on improved compasses by M. De Sire Lebrun. On cold-drawn pipes by M. Le Dru.
3. Green (Dr.) on Mr. Nasmyth's steam-hammer.
4. Perigal (H.) on a process supposed to have been used in constructing the pyramids.
5. Fairbairn (W.) on combustion of fuel and prevention of smoke.

1. Mr. Bowness' plan was similar to that now in operation in Cornwall, to raise the men from the deep mines, with which our readers are already acquainted. Mr. Taylor described the machinery of the latter, but thought the transfer of materials not so practicable as that of men from one lifting rod to another.

3. Mr. Nasmyth's steam-hammer is a most ingenious invention, and likely to become general in iron and other foundries. The hammer itself may be of the weight of five, or six, or more tons. It is to be attached to the piston of a cylinder, arranged above, to be raised by steam, and then to fall by its own weight. It can be worked with great rapidity, and so regu-

lated that this ponderous mass may be made to drop on a walnut so as to crack the shell and not injure the kernel.

A member present said that he had seen one of five tons weight in operation; and such confidence had the workman in his power to moderate the fall, that he held his snuff-box under the enormous hammer for it to shut the lid.

5. Mr. Fairbairn's paper opened views of considerable economical interest. By the consumption of smoke he shewed an immense amount of saving, in ways which do not suggest themselves to the common observer; and he expressed a hope that within twelve months, or two years, this desirable object would be effected by legislative enactment. If so, one half the fuel now used would be sufficient; and in the expense of washing alone, it had been calculated that 100,000*l.* a year would be saved in Manchester. Much stress was laid on the careful and attentive character of the men employed in superintending the fires.

Evening Meeting.—M. Lyell delivered his very interesting lecture on the geology of North America. Unfortunately the Concert Room is probably the worst constructed in England for the propagation of sound, and accordingly only the few of the audience nearest the platform had the advantage of hearing this excellent and instructive discourse.

LITERARY AND LEARNED.

NOTE ON B.A. OXON'S PAPER

Inserted in our last No.

P.S. The ancient comparison of darts or arrows to serpents had obvious grounds in the swiftness, hissing, and infliction of wounds of both, and in some cases the poisonous nature of these wounds; later, the invention of Greek fire, which was attached to missiles of various kinds, would complete the likeness to the fiery flying serpent. In the early days of fire-arms, several names connected with the serpent-race were given them: for instance, "serpentyne," "pestilent serpenter," "culverin" (French *coulevrine*, from *couleuvre*, Lat. *coluber*, snake), "fire-drake" (Anglo-Saxon *draca*, dragon, and German *Feuer-drache*; German *Feld-schlange*, field-snake; Dutch *slang-stuk*, snake-piece, and *vuur-braaker*, spit-fire: the French military term, it may be added, for artillery in general is "*bouches à feu*." Of these names, some are said to be derived from the twisted snakes forming useful and ornamental appendages to the breech of the gun; others plainly owe their origin to their resemblance to the serpents or dragons vomiting fire and smoke, to be found in perhaps every mythology, guarding hidden treasures.

Contributors to Periodicals.—It would seem from the correspondence between Mr. Murray and Mr. Southey, so uncandidly begun by the latter, as we think, in a public newspaper, and now, we trust, finally closed, that by the last Copyright Act the property in contributions to periodicals remains with the writer, notwithstanding the price paid by the proprietor or publisher for the use of his manuscript.

FINE ARTS.

WELLINGTON STATUE AT GLASGOW.

We learn from the Glasgow journals, that this equestrian group was inaugurated on Tuesday with great public ceremonials. Mr. Sheriff Alison pronounced an enthusiastic oration, rejoicing in the *nationality* around; and highly applauded the *foreign* sculptor Marochetti, by whom the statue of the British hero had been executed. The pedestal, of Peterhead granite, is 8½ feet high, and covered with bronze, on which the horse stands, in a state of repose (we are told), and "as if listening to some distant sound." The rest of the description states that the head is that of an Arab, with broad forehead and wide nostrils; that the forefeet are a little in advance, in an easy posture, the reins lying slack; and the Duke, a portrait of the prime of life, in the position of a general reviewing his troops. He is in a field-marshal's uniform, and decorated with orders. The basso-relievos on the south and north sides of the pedestal represent the battles of Assaye and Waterloo. The latter has adopted the critical moment when the Duke is *said to have said*, "Up, Guards, and at 'em!" which, it may be as well, in point of history, to remark, his Grace never uttered. The other two relievos are of a domestic or home character.

Findens' Royal Gallery of British Art. Part I. Dedicated by command to Her Majesty. London, J. Hogarth, for the Proprietors.

The interruption of *Findens' Royal Gallery* was a subject of deep regret to every lover of our national school and of British art. The skill and the cost bestowed upon it made it an honour to the country, and ought to have made it the means of very handsome remuneration to the eminent brother engravers whose design it was. But, alas! "'tis not in mortals to command success;" and it is now only a source of qualified satisfaction to see the publication again taken up, and the patronage of the Royal Academy, and a long and distinguished list of noble and wealthy amateurs, extended to it. The first part, now before us, consists of Oberwesel (on the Rhine), painted by J. M. W. Turner, R.A., and engraved by J. T. Willmore, A.R.A.; Interior of a Highlander's House, painted by E. Landseer, R.A., engraved by W. Finden; Peter delivered from Prison, painted by W. Hilton, R.A., engraved by E. J. Portbury: and the performance and promise are alike creditable to the artists and auspicious for the undertaking. Turner's poetical and picturesque landscape has lost no beauty in Mr. Willmore's hands; though the figure of the child in the foreground is large of proportion, and the woody group behind the tower on the left indistinct in foliage. The middle distance, however, is charming, and the high trees on the right have a very fine effect. Landseer's Highland Cottage was greatly admired as a painting full of domestic truth, and rich in animal life and death, for a variety of moor and mountain game lies at the feet of the ancient sportsman. The dogs are well contrasted between the heavy sleep attendant on the fatigues of the chase, and the animated begging for a bit of upheld bread. The contrast with the Highlander, too, is skilfully accomplished by the introduction of a bonny lassie, and an old dame in the background; the interior itself, and all its furnishing, are in the best possible keeping. Hilton's Deliverance of St. Peter worthily closes this diversified trio. Among the few productions of the highest sacred art which our painters are encouraged to execute, it is one of the foremost which have been exhibited during a number of years, and serves now to enshrine the memory of the amiable and accomplished artist from whom it emanated. The sleeping sentinels are conceived with the true feeling of the greatest masters, and the angel is of a divine cast. The head of Peter is also happily expressive. Of slight blemishes (in spite of *ne sutor ultra*, literally) we may notice, that one foot of the saint is shod and the other bare, and the left wrist of the angel a touch over-swollen.

Again repeating our commendations of the work, we have only to express a hope that adequate pains will be taken to bring off the impressions in as clear and perfect a manner as possible,—which hint is not given without reason.

Forbes Winslow, M.D. London, C. Mitchell.

A characteristic likeness of Dr. Winslow by T. H. Maguire, and lithographed from the life, is among the fine-art publications of the week, and is executed in a remarkably pleasant style. The doctor's writings on the interesting subject of insanity, which now occupies so much of the public mind, and his evidence on the trial of M'Naghten, render this a fit addition to our literary and scientific gallery.

BIOGRAPHY.

Granville Penn, Esq. F.S.A., died last week at his seat, Stoke Park, Berks, at the patriarchal age of eighty-two, and for nearly half a century occupied a marked place in the literature of England, especially as connected with sacred subjects. Of a name and family of great note, both in the old and new world, his later years were passed in great retirement, amid some of the most lovely scenery in our isle. The following works are from his pen:—

1. Critical Remarks on Isaiah vii. 18. 4to. Lond. 1799.
2. Remarks on the Eastern Origination of Mankind and of the Arts of Cultivated Life. 4to. Same year.
3. Three copies of his Greek Version of the Inscription on the Stone from Egypt, containing a Decree of the Priests in honour of Ptolemy the fifth. 8vo. 1802.
4. A Christian Survey of all the Principal Events and Periods of the World. 2d edit. 8vo. 1812.
5. The Bioscope; or the Dial of Life explained. 8vo. 1812.
6. The Prophecy of Ezekiel concerning Gog, the last Tyrant of the Church; his Invasion of Ras, his Discomfiture, and Final Fall examined and in part illustrated. 8vo. 18.4.
7. Original Lines and Translations. 8vo. Lond. 1814.

In a later work, Mr. Penn opposed the rising science of Geology on somewhat similar religious grounds to those taken up by the Dean of York.

THE DRAMA.

Drury Lane.—The ballet of action called the *Deserter of Naples* has been revived here with considerable success, and affords the pantomimic company an opportunity of displaying their peculiar talents. The principal parts are supported by Miss Clara Webster and Messrs. W. H. Payne, Wieland, and T. Matthews.

Princess's.—Mr. Maddox has commenced his season with great spirit, and with every prospect of as much success as he has hitherto obtained. On the opening night, last Saturday, a new singer from the Académie Royale de Musique at Paris made her reappearance* in London as *Lucy Ashton* in *Lucia di Lammermoor*. Mdlle. Nau is an accomplished artist, with a remarkably fine voice, which has been cultivated to the highest degree, and is nearly as perfect a soprano as we ever heard, only occasionally a little wiry in its highest range. With great advantages, however, there is an icy correctness in her intonation and execution which becomes almost wearisome, and is a great drawback to her otherwise striking ability. With a little more life and spirit, some of those outbursts which were the charm of Madame Eugenie Garcia's singing, she would be one of the most finished vocalists that ever appeared in England. Mr. Allen played *Edgar*, and

* She sang here some five years ago.

sang with much feeling and taste, his fine voice being heard to the greatest advantage in this comparatively small theatre, and exhibiting evident improvement upon last season. Mr. Leffler was the *Douglas Ashton*, and a Mr. Hime the *Bucklaw*. The first gentleman is a valuable acquisition to this company, but was not quite up to the mark in his singing. Mr. Hime possesses a tenor, but the organ is poor, and not musical. The opera was followed by the ballet of the *Slave-Market*, which introduced three new dancers, Mons. and Mdlle. Rousset and Mdlle. Teresine. They are clever in their profession, and will be popular additions to this department. A new farce, called *Taking the Pledge*, concluded a very agreeable evening's entertainment, and was carried to a successful termination by the clever acting of Messrs. Oxberry and Walter Lacy. There is nothing very original in the plot or dialogue; but *Taking the Pledge* is a merry enough afterpiece.—On Tuesday, Mr. James Wallack made his first appearance here in a three-act drama, called *Don Cæsar de Bazan*. It is the joint production of Messrs. A'Beckett and Mark Lemon, taken from the French, and very effective. The story turns on the adventures of a Spanish cavalier, played with great force by Wallack, who, after all sorts of scrapes and 'scapes, finds himself wedded to the lady of his love, *Maritana*, once a street ballad-singer, but finally Countess de Bazan. Mrs. Stirling did full justice to the part, displaying much tenderness and feeling throughout her performance. *Don Cæsar de Bazan* has been put upon the stage in a perfect manner as regards costume, is an interesting drama, very cleverly acted, and will no doubt prove attractive. The house has been well filled both for the opera and play.

Adelphi.—*Foreign Affairs* has been transplanted to this theatre from the Haymarket, and is as popular and effective in its new locality as it was in its old. It is as amusing as ever, and as capitally acted.

Victoria.—Mr. Charles Sloman, the clever extemporaneous singer, is adding to his reputation by improvising a medley nightly at the Victoria. We should like to see him in a scene more worthy of his talents.

The City of London Theatre, though situated in a bad neighbourhood, is now attempting a respectable dramatic course. It has been opened by Mrs. W. Lacy, with the *School for Scandal* for legitimate comedy, and the house was full. A clever address, by Mr. Albert Smith, was spoken on the occasion; and all began in a promising manner.

VARIETIES.

The New Edinburgh Review, No. 1 (London, Hayward and Adam; Edinburgh, J. Menzies) has appeared with this month of October, and seems to us to be a fair sample of home-brewed literature. On the subject of Gipsies, whom he considers as merely itinerant outcasts, we think the writer utterly mistaken; and by far the best paper that entitled "Autobiography of a living writer," taking a view of the common classes of society about the beginning of the present century. We wish we could say they are happier or more comfortable *now*.

The Surrey Zoological Gardens closed a most deservedly prosperous season on Thursday evening. The fire of London is, therefore, extinguished for the present; but the fine collection of animals, in admirable order, still invites the visits of the curious and intelligent.

Drapers' Association.—At a crowded meeting at Exeter Hall, on Wednesday evening, the new Sheriff and Alderman Sydney in the chair, some feeling addresses were delivered, and resolutions adopted, in favour of shutting drapers' shops throughout London, during the ensuing winter, at an earlier hour than has hitherto been the bad custom. Not only for the sake of the shopmen and women,—held so injuriously to their overwhelming tasks,—but for the sake of buyers, who are never so faithfully served by night as by day, it is earnestly to be hoped that this beneficial change will be thoroughly effected. Customers should learn to know that the late houses are those where they are most easily and most likely to be imposed upon with inferior and damaged articles. —*Aunt Margery.*

Cutaneous Infirmary.—The natural outcry of the inhabitants of New Bridge Street, Blackfriars, against the establishment, in the very midst of them, of an infirmary for the cure of cutaneous diseases, has now come to the *scratch*. Sir James Duke, the alderman of the ward, has written strongly from Scotland (where such a *matter* is well understood) that he will give the attempt every opposition in his power; and, though the projectors declare the nuisance to be only skin-deep, there seems to be no likelihood of reconciling even the inmates of Bridewell to the pleasant exercise it offers to introduce among them. They would rather, if allowed to pick, stick to oakum.

Sunflower Company.—It is a fact, that a company is actually being organised for promoting the cultivation of sunflowers to supersede breadcorn, flax, and other vegetable products hitherto held to be essential to the wants of man. Marygold, china-aster, chrysanthemum, and Jerusalem-artichoke companies may also be expected to issue their prospectuses immediately. It is suggested that the poet Moore should be at the head of the sunflowerists, and his verse on that turning plant their epigraph.

"As the Sunflower turns to her God when he sets
The same look which she turn'd when he rose."

Pleasures of the Provinces.—Whilst, till within the last ten days, the capital has been circumscribed in its dramatic amusements, and almost deserted by its concerts (ceaseless during the Season, but now only kept alive by Russell's justly popular entertainments), the provinces have been enjoying every variety of amusement. Two parties from the Italian Opera have skirred the country—Wilson has delighted Devon, and other counties, with his Scottish song—and Lover with his Irish humours and melodies; and Charles Kemble has been making Shakspere as familiar as a cotton-mill to Manchester. By and by all our bees will be back in the great hive.

Prodigious Bridge.—There is talk of a chain bridge across the Mersey to connect Liverpool with Birkenhead and Cheshire. After this, Dover and Calais?

The Rev. Robert Taylor, so notorious as the sacred ally of Carlile in the preaching of infidelity, and the contracted husband of the no less notorious Miss Richards of the Rotunda, now Mrs. Dorey, died last month at Tours, in France, whither he had gone to avoid paying damages for his breach of promise to the lady, and where he practised as a medical man. He was fifty-two years of age, and has left a widow and a lot of manuscripts. Taylor received a university education, and rather distinguished himself at college; he was dis-priested for his pestilent doctrines, and afterwards fell into that train of bold atheistical license which procured him the unenviable distinction of being called "The Devil's Chaplain."

Curious Erratum.—In a provincial paper we have just read the following erratum:—"Death of (say) John Smith in our last, for '*apparently*' read '*sincerely*' regretted."

LITERARY NOVELTIES.

In the Press.—The Lawyers in Love; or, Passages from the Life of a Chancery Barrister, by W. J. Neale, Esq., author of "Cavendish," &c.

LIST OF NEW BOOKS.

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13	—	46	14·1	17	—	45	22·9
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Miss Bremer's Christian name in Swedish is spelled *Fredrika*.

ERRATA.—In our last No., p. 633, middle col., line 30, *for* 'readers,' *read* 'leaders;' p. 634, first col., line 1, *for* 'Kupper,' *read* 'Kuppfer,' and *for* 'Hanstein,' 'Hanstecn;' line 2, *for* 'Boguslawski,' *read* 'Boguslawski;' and line 16, *for* 'renewals—only such' *read* 'renewals only—such.'

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